Postbaccalaureate Program Expansion Feasibility Study

Directed by SJR 170

Contracted by Kentucky Council on Postsecondary Education

Prepared by Deloitte Consulting

Final Report

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SJR 170 Study Overview

The Kentucky Council on Postsecondary Education (CPE) contracted with Deloitte Consulting between August and November 2024 to conduct four feasibility studies and offer recommendation regarding the new program approval process going forward.

The study evaluates the feasibility of launching these four new postbaccalaureate programs:

A doctoral program for professional practice and licensure in **osteopathic medicine (DO)** at **Eastern Kentucky University**

One or more PhD programs leading to an **R2 "High Research Activity" designation** from the Carnegie Classification at **Western Kentucky University**

A doctoral program for professional practice and licensure in **veterinary medicine (DVM)** at **Murray State University**

A **Doctor of Philosophy (PhD)** in Integrated Agroecology and Sustainable Agriculture at **Kentucky State University**

The study also offers recommendations to CPE and policy leaders regarding the evaluation and approval of future program proposals.

EXECUTIVE SUMMARY

Eastern Kentucky University Proposal Overview

Proposal and Institution Overview

Institutional Background

- Eastern Kentucky University (EKU) is a regional public institution located in Richmond, Kentucky, with a headcount enrollment of nearly 14,000 undergraduate and graduate students[1].
- EKU has proposed opening a doctoral program for professional practice and licensure in osteopathic medicine (DO). This would be the second DO school in Kentucky and the first to be offered by a public institution. Kentucky currently has two MD programs at the University of Kentucky and the University of Louisville.

Institutional Motivating Factors

- Help address the growing shortage of physicians at both the national and state levels.
- Provide opportunities for members of Kentucky's regional and rural communities to obtain a medical education, enabling them to return and practice in areas with the direst need for primary care physicians.
- Enhance the institution's brand by expanding its academic offerings, thereby attracting a wider pool of students and faculty.
- Increase institutional revenue with the expected high margins of a DO program.

What is Osteopathic Medicine?

A College of Osteopathic Medicine (COM) produces Doctors of Osteopathic Medicine (DOs), who take a holistic, patient-centered approach focusing on preventive health care and nutrition. This contrasts with an allopathic medical school, which produces Medical Doctors (MDs) and emphasizes diagnosing and treating medical conditions. Both programs share similar application requirements and curricular structures, though most DO graduates tend to practice in primary care settings while more MD graduates go into medical specialties. Notably, most COMs employ a distributive model of clinical education that sends students into community hospitals, clinics, and other medical facilities for clinical rotations in their third and fourth years, while allopathic medical schools have affiliated teaching hospitals where students complete their clinical education.

Fast Facts[2]

Fall 2028
Target Program Launch Date

150
Target Cohort Size by Year 5

600
Target Enrollment by Year 5

19
Estimated New Faculty Hired by Year 5

62
Estimated New Staff and Administrators by Year 5

Notes: 1) Enrollment headcounts exclude Dual Credit students; 2) Faculty and staff estimates are based on peer analysis and are subject to change. Sources: EKU stakeholder interviews, proposal, and related materials; KY CPE Data Center.

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Murray State University Proposal Overview

Proposal and Institution Overview

Institutional Background

- Murray State University (Murray State) is a regional public institution located in Murray, Kentucky, with a headcount enrollment of nearly 9,000 undergraduate and graduate students[1].
- Murray State has proposed a doctoral program for professional practice and licensure in veterinary medicine, utilizing a distributive model for veterinary education. This would be the first veterinary medical (DVM) program in Kentucky.

Institutional Motivating Factors

- Help address the shortage of rural veterinarians at both the national and state levels and support Kentucky's agriculture industry.
- Provide opportunities for members of Kentucky's regional and rural communities to obtain a veterinary education close to home and offer their existing pre-veterinary students an opportunity to continue their studies.
- Leverage existing agriculture school's facilities (e.g., Breathitt Veterinary Center) to expand veterinary education.

What is a Distributive Model of Veterinary Medicine?

In a distributive model of veterinary education, veterinary students complete their core science, anatomy, and pre-clinical skills curricular requirements in a traditional classroom setting on-campus and complete their clinical education with a distributed network of clinical partners, including private practices, urgent care clinics, emergency clinics, referral hospitals, shelters, zoos, and wildlife rehabilitation centers. This contrasts with a traditional model of veterinary education, where Doctor of Veterinary Medicine (DVM) students complete most of their clinical education in affiliated teaching hospitals.

Fast Facts[2]

Fall 2027
Target Program Launch Date

70
Target Cohort Size by Year 5

280
Target Enrollment by Year 5

15
Estimated Incremental Faculty by Year 5

42
Estimated Staff and Administrators by Year 5

Notes: 1) Enrollment headcounts exclude Dual Credit students; 2) Faculty and staff estimates are based on peer analysis and are subject to change. Faculty count includes current Murray State faculty who may teach in the College of Veterinary Medicine (CVM). Sources: Murray State stakeholder interviews, proposal, and related materials; KY CPE Data Center.

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Western Kentucky University Proposal Overview

Proposal and Institution Overview

Institutional Background

- Western Kentucky University (WKU) is a regional, comprehensive university located in Bowling Green, KY serving nearly 14,500 undergraduate and graduate students[1]. WKU's current Carnegie Classification is Doctoral Universities: Doctoral/Professional Universities.
- WKU leadership has proposed launching one or more doctoral research programs in pursuit of a Doctoral Universities: High Research Activity (R2) Carnegie Classification.[2] There are currently no R2 universities in Kentucky. WKU leadership have identified a PhD in Data Sciences as the likely first program launched should their R2 proposal be approved.

Institutional Motivating Factors

- Recognize past research achievements and reinforce WKU's strategic commitment to advancing education through research-driven undergraduate and graduate programs.
- Enhance and elevate the university's profile and attract high-quality faculty and students and external funding.
- Capitalize on economic growth in region, particularly in labor-aligned fields such as data sciences, to serve the needs of the Commonwealth and drive increased economic development in Bowling Green.

What is an R2 Carnegie Classification?

The Carnegie Classification system was originally developed to support higher education research, but were recently revamped out of concerns that, in some cases "the chase for an R1 or R2 designation may come at the expense of an institution's core missions, like service to the community and undergraduate instruction."[3] Classifications are released every three years (next in 2025) and are based on a) three-year rolling average data or b) most recent year data. **To achieve R2 status, a university must confer a minimum of 20 doctoral research degrees[4] and a minimum $5M in total research expenditures**.

Fast Facts[5]

Fall 2026
Target Data Sciences PhD Program Launch Date[2]

29
Target Data Sciences PhD Enrollment by Year 5

2
Estimated Number of New Data Sciences Program Faculty by Year 5

Notes: 1) Enrollment headcounts exclude Dual Credit students; 2) As of 2025 this will be retitled to "R2: High Research Spending and Doctorate Production;" 3) Reimagining the Carnegie Classifications: A Q&A; 4) Doctoral research degrees as defined by National Center for Education Statistics IPEDS data; 5) Fast Facts represent the PhD in Data Sciences program. WKU has proposed three additional programs proposed for launch by 2030, but details on target enrollment and number of faculty hires have not yet been finalized. Sources: Carnegie Classification of Institutions of Higher Education 2025 Research Designations; 2025 Research Designation FAQs; KY CPE Data Center; Reimagining the Carnegie Classifications: A Q&A; WKU stakeholder interviews, proposal, and related materials.

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Kentucky State University Proposal Overview

Proposal and Institution Overview

Institutional Background

- Kentucky State University (KSU) is a regional, comprehensive university located in Frankfort, KY serving over 1,400 undergraduate and graduate students.[1] KSU's current Carnegie Classification is Baccalaureate Colleges: Diverse Fields. KSU is one of two land-grant institutions in Kentucky.
- Land-grant institutions were established to expand agricultural and technical education and access to such education. KSU is also one of two Historically Black Colleges and Universities (HBCU) in Kentucky. HBCU's are institutions "established prior to 1964 with the primary mission of educating Black Americans."
- KSU leadership has proposed launching a PhD in Integrated Agroecology and Sustainable Agriculture. This would be the first doctoral program of its kind in Kentucky, although related doctoral programs in agriculture and sustainability exist.

Institutional Motivating Factors

- Expand access to agriculture, environment, and data sciences PhD programs for traditionally underrepresented groups.
- Maximize KSU's existing high levels of research and grant funding and elevate awareness of KSU's research profile.
- Capitalize on institutions strengths in Environmental Studies, Aquaculture, and other agriculture programs.

What is Integrated Agroecology?

KSU's proposal highlights that Integrated Agroecology and Sustainable Agriculture focuses on advanced teaching and research on agricultural principles and practices with the goal of long-run enhancements to agricultural production, environmental quality, nonrenewable resource management. The program is designed to prepare a specialized workforce to ensure a viable and socially responsible economy for the citizens of Commonwealth. Agroecology is the integrative study of the nexus of plants, animals, soil, environment, and humans. Balancing the relationship among these components is imperative for sustainable agriculture production.

Fast Facts

Fall 2025
Target Program Launch Date

20
Target Enrollment by Year 5

4
Estimated Number of New Faculty by Year 5

Note: 1) Enrollment headcounts exclude Dual Credit students. Sources: Association of Public & Land-Grant Universities; KY CPE Data Center; KSU stakeholder interviews, proposal, and related materials; NCES Historically Black Colleges and Universities.

Approach and Methodology

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Guiding Principles

The following guiding principles formed the foundation of our approach, ensuring rigor and objectivity throughout our feasibility study.

Guiding Principle	Description
School-Level Collaboration Balanced with Evidence-Based Independence	• Actively engaged university leadership throughout the analysis for their input and awareness. • Maintained the overall validity and independence of the analysis by mapping final conclusions to validated and reputable data sources.
Holistic and Comprehensive Assessment	• Considered an expansive array of feasibility metrics, both quantitative and qualitative. • Provided decision-makers with a comprehensive understanding of the proposals under review.
Consistent Approach while Considering University Specifics	• Applied a consistent overarching approach to all feasibility studies while independently evaluating each institution's unique attributes and contexts.
Stakeholder Viewpoints	• Included diverse stakeholder perspectives in the assessment. • Developed a holistic understanding of the program proposals, processes, and statutes under consideration.
Forward-Thinking Perspective	• Reviewed the programs, processes, and statutes reviewed from the perspective of both the current and future operating environment. • Considered expected future changes in the higher education ecosystem.
Materiality of Impact	• Prioritized attention on analysis elements that significantly impact feasibility outcomes, engaging in deeper analysis for high impact areas.
Balanced Focus on Kentucky Needs and University Goals	• Dedicated to understanding how proposals could help to address the needs of the Kentucky Commonwealth as well as unique goals of individual universities.

EXECUTIVE SUMMARY

Feasibility Study Methodology | Qualitative Inputs

The project team engaged with a diverse range of internal and external stakeholders, including academic and administrative leaders, government officials, industry professionals, and peer institution leaders, to gather comprehensive feedback and insights.

75

UNIVERSITY FACULTY, STAFF, ADMINISTRATORS

Engaged with 75+ academic and administrative leaders (including provosts, deans, and faculty and staff representatives) through on-campus and virtual meetings.

11

UNIVERSITY PRESIDENTS AND CPE LEADERSHIP

Met with each university president to discuss the vision and strategy for the new programs of study at their institution. Led seven interviews with CPE leaders and maintained regular communication with CPE through weekly status calls to promote alignment and transparency.

5

ON-SITE VISITS

Visited all four campuses as well as CPE in person to gain first-hand perspective to each campus, visiting relevant facilities and engaging with key stakeholders where possible.

12

GOVERNMENT AND COMMUNITY OFFICIALS

Engaged with more than twelve Kentucky government officials, including state Senators, Representatives, the Warren County Judge/Executive, the Governor's office, and the Bowling Green Chamber of Commerce.

7

PEER INSTITUTIONS

Conducted seven interviews with leaders from other Kentucky universities (UK, KCTCS, Morehead) and peer institutions (Auburn, LMU, Texas Tech, UMES) to gain perspectives, financial benchmarks, and lessons learned. Benchmarked against 100+ additional peer institutions using publicly available data.

9

INDUSTRY LEADERS AND EMPLOYERS

Met with leaders from industry associations, reviewed letters from interested industry practitioners, and engaged with potential employers and clinical partners.

EXECUTIVE SUMMARY

Feasibility Study Methodology | Quantitative Inputs

The project team conducted a thorough review of internal documents and data, alongside external benchmarks and trends, to independently validate institutional assumptions and provide a comprehensive feasibility evaluation.

University Provided

Reviewed 220+ documents from CPE, EKU, KSU, Murray State, and WKU, covering academic, student, financial, strategic, personnel/employee, and facilities data (e.g., strategic plans, feasibility studies, program proposals, organizational charts, university policies). Analyzed CPE's Interactive Data Center for **publicly reported data** on enrollment, academic, and student success metrics.

Data Categories

- ❑ Enrollment Data
- ❑ Financial Data
- ❑ Student Success Data
- ❑ Salaries Data
- ❑ Program Budget Projections

External Sources

Validated institutional assumptions by reviewing agency reports (e.g., credit agencies, government entities) as well as accreditation standards, policies, and requirements from COCA[1], AVMA[2], and SACSCOC[3]. Researched **peer benchmarking data** for projections using reputable sources and insights from external stakeholder interviews.

Data Categories

- ❑ Demographic Data
- ❑ Labor Market Data
- ❑ Peer Institutional Benchmarks
- ❑ Kentucky Performance Funding Model Data
- ❑ Industry Association Data
- ❑ Accreditation Requirements

Notes: 1) Commission on Osteopathic College Accreditation (COCA); 2) American Veterinary Medical Association (AVMA); 3) Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).

Feasibility Study Methodology | Program Evaluation Criteria

The project team evaluated the feasibility of each program proposal across nine dimensions in alignment with SJR 170. Each feasibility study in this report is organized around these nine criteria, found below.

SJR-170 Required Current State Considerations

Financial Health

The institution's **recent financial performance** as measured by net operating margins, balance sheet ratios, capital expenditures, and Composite Financial Index (CFI).

Research Infrastructure

The **sufficiency of research facilities**, funding availability, and institutional support for faculty and student research initiatives.

Student Success

The institution's **historical performance** on student success outcomes, such as graduation rates, retention rates, and performance funding metrics.

Faculty Recruitment

The institution's ability **to attract and retain** qualified faculty members.

Workforce Alignment

The alignment of academic programs with current and future workforce needs, **including partnerships with industry** and employment opportunities for graduates.

Cost-Benefit Analysis

The costs associated with **launching and operating** new programs relative to the expected returns on investment.

Student Demand

The current and projected student interest and **enrollment trends** for specific programs or fields of study.

Accreditation Standards

The institution's ability to meet the **standards and requirements**, necessary to obtain and maintain program accreditation.

Clinical Placements

The availability and quality of clinical placement **opportunities for students** in programs that require hands-on, practical experience.

Summary of Findings

EXECUTIVE SUMMARY

Feasibility Assessment: Eastern Kentucky University

Eastern Kentucky University has proposed launching a new college of osteopathic medical (COM) with a target enrollment of 150 students per cohort, with new cohorts starting annually in 2028.

SJR-170 Required Current State Considerations

Financial Health	Y	EKU's financial health assessment surfaced some risks from elevated debt levels that could jeopardize their ability to access funding and manage a significant new financial investment.
Student Success	G	EKU currently outperforms other Kentucky regional comprehensives on first-time, full-time student retention. EKU has performed better than other KY public comprehensive institutions on five out of nine metrics tracked in the comprehensive funding model in the last five years.
Research Infrastructure	Y	EKU's current research expenditures are low relative to the other KY comprehensive universities, though it has foundational infrastructure to support research growth, including a dedicated Office of Sponsored Programs.
Cost-Benefit Analysis	G	The proposed EKU COM is resource-intensive but projected to generate surpluses under both moderate and conservative planning assumptions by FY31 without ongoing state support and is anticipated to generate significant economic impact in Madison County and KY more broadly.
Student Demand	G	Student demand for seats in COMs is high, even amid growth in the program pipeline as new COMs launch.
Workforce Alignment	G	By producing more physicians, many of whom would be expected to go into primary care, the EKU COM could address the current shortage of primary care physicians in eastern KY and the Commonwealth more broadly.
Faculty Recruitment	Y	Peer COM benchmarks suggest that EKU will need to offer salaries that far exceed their current average faculty salary levels to compete for medical faculty.
Accreditation Standards	Y	Per accreditation guidelines, EKU will need to hold approximately $48.75M in reserves until it graduates its first class, which EKU plans to ask the state legislature to fund. EKU will also need to grow research infrastructure and ensure quality across clinical education sites to maintain accreditation, requiring significant new investments.
Clinical Placements	Y	Several regional healthcare leaders, including Baptist Health Richmond, ARH, and CHI St. Joseph, have expressed interest in providing clinical education to EKU COM students, documented in letters of support, though evidence of an anchor partner or sufficient clinical capacity could not be validated.

Overall Feasibility Assessment: While some feasibility concerns are noted, many of these concerns would be present at any institution planning to launch a COM given the significant financial and reputational risk that such an endeavor carries. If given permission to pursue the COM, EKU will need to carefully manage its balance sheet to ensure access to necessary capital, to plan to offer faculty salaries that exceed its current salary levels to attract faculty, to cultivate and manage an extensive network of clinical partners, and to invest in research infrastructure to meet accreditation standards for scholarly activity.

Assessment Key

G No/few feasibility concerns Y Some feasibility concerns R Significant feasibility concerns

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Feasibility Assessment: Murray State University

Murray State University has proposed launching a new college of veterinary medicine (CVM) with a target enrollment of 70 students per cohort, with new cohorts starting annually in 2027.

SJR-170 Required Current State Considerations

Financial Health	G	Murray State's financial health assessment points to strong financial management practices and a healthy balance sheet. Financial pressures observed (e.g., slowed tuition revenue growth) are common across public higher education.
Student Success	G	Murray State's undergraduate retention rates and six-year graduation rates have consistently outperformed their peer group average, and Murray State has performed better than or equivalent to other KY public comprehensive institutions on 8 of 9 metrics tracked in the KY performance funding model.
Research Infrastructure	G	Murray State's research expenditures are comparable to the other KY regional comprehensives and have grown by ~30% across the last five years. Murray State also possesses veterinary research equipment in their Breathitt Veterinary Center and other facilities.
Cost-Benefit Analysis	Y	Murray State's CVM is projected to break-even under moderate planning assumptions in FY30 without ongoing state support and anticipated to generate significant economic impact in Calloway County and KY. Murray State's existing faculty and infrastructure in animal sciences offset some of the significant startup costs.
Student Demand	G	Student demand for seats in DVM programs is high, even amid growth in the program pipeline as new CVMs launch.
Workforce Alignment	Y	Industry experts disagree about the demand for new veterinarians at the national level, though there is an undisputed shortage of rural large animal vets in KY. Some experts purport that a CVM cannot meaningfully address the rural shortage, though Murray State has a record of successfully placing graduates in rural settings.
Faculty Recruitment	Y	There is presently a shortage of veterinary faculty in the US, which is positioned to worsen as planned new vet schools launch in the next decade. Murray State has several existing veterinary faculty on staff who can teach in this program, mitigating the risk.
Accreditation Standards	Y	To meet accreditation standards, Murray State will need to invest significantly to provide sufficient facilities for the housing of animals used in teaching and research, to satisfactorily produce substantial related research, and to ensure quality of education and facilities at distributed clinical sites.
Clinical Placements	Y	In a KVMA[1] survey, over 170 veterinarians across KY expressed interest in supporting clinical education for Murray State students, though a distributive clinical education model requires an expansive partner network, and Murray State may need to look out of state to fulfill its needs, particularly for veterinary specialties.

Overall Feasibility Assessment: Murray State has a strong foundation upon which to build a new CVM, including strong institutional finances, existing facilities and expertise in animal sciences, and the proposed CVM would contribute positively to the state and local economy. However, opposition from the veterinary industry in KY could hamper their pursuit, calling into question the alignment of this program with state workforce needs, particularly considering the perceived effectiveness of existing pathways for KY residents to pursue vet education. Faculty recruitment also poses a risk due to current industry shortages.

Assessment Key

G No/few feasibility concerns Y Some feasibility concerns R Significant feasibility concerns

Note: 1) Kentucky Veterinary Medical Association (KVMA)

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Feasibility Assessment: Western Kentucky University

Western Kentucky University has proposed launching one or more doctoral research degrees, starting with a PhD in Data Sciences, with the goal of achieving an R2 (High Research) Carnegie Classification. PhD in Data Sciences is proposed to launch in Fall 2026 with six students.

SJR-170 Required Current State Considerations

Financial Health	Y	**R2**: Risks from declining operating revenues and rising expenses as identified in WKU's financial health assessment raise some concerns over the institution's long-term ability to fund the pursuit of new initiatives.
Student Success	G	**R2**: WKU's graduation and retention rates rank above the average for comprehensive four-year institutions in KY. In 2022, WKU's first-year retention rate was 77% and six-year graduation rate was 54%.
Research Infrastructure	G	**R2**: WKU has taken several intentional steps to lay the foundation for increased research, including expanded central research staffing and trainings, budget allocations to provide research seed funding, and refining faculty workload policies.
Cost-Benefit Analysis	Y	**Data Sciences PhD**: Like most PhD programs, WKU's PhD in Data Sciences is not expected to generate net surplus, but the program will require relatively limited institutional investment to support operational expenses given the small program size and existing infrastructure.

Student Demand	G	**Data Sciences PhD**: Nationally, program conferrals in Data Sciences and related fields across levels increased from 2020 to 2023. Doctoral programs represent a small but growing enrollment market, with just 14 conferrals in 2023 (33% CAGR 2020-2023).
Workforce Alignment	G	**Data Sciences PhD**: Data Sciences occupations in Kentucky have grown steadily over the past five years (1.5% CAGR 2018-23), outpacing overall occupation growth in Kentucky, with growth projected over the next decade.
Faculty Recruitment	G	**Data Sciences PhD**: WKU is planning a relatively small number of faculty hires (two new faculty in first five years), which limits faculty recruitment risks. Proposed salaries are in line with average faculty salaries at KY comprehensive peers.
Accreditation Standards	G	**Data Sciences PhD**: Approval of new doctoral programs, including Data Sciences PhD, will require review and approval by SACSCOC[1] under the Substantive Changes process.
Clinical Placements	◌	Not Applicable

Overall Feasibility Assessment: PhDs offered in pursuit of R2 will not generate net surplus (like most PhD programs); each will require a relatively small, but sustained, institutional investment. New PhDs and R2 status could benefit KY via industry partnerships and expanded access to research for citizens. It could elevate WKU's profile beyond KY as well. WKU's intentional approach to expanding research infrastructure supports feasibility, but enrollment declines and expense growth raise some concerns about long-term financial management. Data Sciences is a sound choice for first research PhD given growing enrollment and labor market.

Assessment Key

G No/few feasibility concerns Y Some feasibility concerns R Significant feasibility concerns

Note: 1) Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).

EXECUTIVE SUMMARY

Feasibility Assessment: Kentucky State University

Kentucky State University, a land-grant and HBCU, has proposed launching a PhD in Integrated Agroecology in Fall 2025 with an inaugural cohort of fifteen students to expand on institutional strengths in agriculture-related disciplines.

SJR-170 Required Current State Considerations

Financial Health	R	Although KSU is showing some signs of financial improvement, including progress on its Management Improvement Plan to address cash flow and financial policy concerns, ongoing financial issues may provide an unsteady foundation from which to launch a new endeavor such as research PhDs.
Student Success	R	KSU has the lowest first-year retention rates and six-year graduation rates of KY four-year public universities. Six-year graduation rates have improved from 18% in 2018 to 33% in 2022 but remain below the KY comprehensives average.
Research Infrastructure	G	Thanks in part to its access to land-grant funding and ongoing faculty research contributions, KSU's research expenses far exceed its Kentucky comprehensive peers.[1] Recent investments in the Office of Sponsored Research and facilities also supports viability of Integrated Agroecology PhD.
Cost-Benefit Analysis	Y	Like most PhD programs, the Agroecology PhD is not expected to generate net surplus. However, the program will require a relatively limited institutional investment to support operational expenses given the small program size and existing infrastructure.

Overall Feasibility Assessment: KSU's proposed PhD in Integrated Agroecology would grow an area of strength for KSU in a key industry for KY. However, significant concerns remain about KSU's ability to launch this new program without jeopardizing the institution's commitment to undergraduate success and ongoing financial stability, given the institution's historical financial and student success challenges.

Student Demand	G	PhD in Integrated Agroecology capitalizes on institutional strengths, both in enrollment pipeline and strategic alignment between agriculture and land-grant status. Enrollment in KSU's School of Agriculture & Natural Resources grew by 112% from 2019 to 2023.
Workforce Alignment	G	PhD in Integrated Agroecology aligns with Kentucky employment in the agriculture industry. The PhD program prepares students for industry employment (direct workforce impact) as well as academia (indirect workforce impact via research and innovation).
Faculty Recruitment	G	The relatively small number of planned faculty hires (four by Year 5) limits faculty recruitment risks. Proposed salaries exceed average faculty salaries at peer colleges and universities, which may further ease recruitment and hiring.
Accreditation Standards	G	Approval of the PhD in Integrated Agroecology will require review and approval by SACSCOC[1] under the Substantive Changes process.
Clinical Placements	○	Not Applicable

Assessment Key

G No/few feasibility concerns Y Some feasibility concerns R Significant feasibility concerns

Note: 1) Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).

EXECUTIVE SUMMARY

Relevant Powers & Duties of CPE

Denotes duties and responsibilities related to the scope of SJR 170

To ensure a well-coordinated and efficient public postsecondary education system, CPE's statutory duties outlined by KRS 164.020 include, among other duties, overseeing the strategic agenda, leading the budget process, and approving academic programming.

CPE | Select Relevant Duties & Responsibilities (Representative, Not Exhaustive)

Strategic Agenda

"Develop and implement the strategic agenda… Revise the strategic agenda and strategic implementation plans based on the strategic agenda…"

Budget & Funding Model

"Lead and provide staff support for the biennial budget process as provided under KRS Chapter 48, in cooperation with the committee…"

Academic Programming

"Define and approve the offering of all postsecondary education…degree, certificate, or diploma programs in the public postsecondary education institutions…Eliminate, in its discretion, existing programs or make any changes in existing academic programs…"

Tuition & Admissions

"Determine tuition and approve the minimum qualifications for admission to the state postsecondary educational system."

Institutional Missions

"Review, revise, and approve the missions of the state's universities and the KCTCS… [CPE] shall have the final authority to determine the compliance of postsecondary institutions with their academic services, and research missions."

Policy Guidance

"Devise, establish, and periodically review and revise policies to be used in making recommendations ot the Governor for consideration in developing recommendations to the General Assembly for appropriations to the universities…"

Technology Management

"Ensure the coordination, transferability, and connectivity of technology among postsecondary institutions…including the development and implementation of a technology plan as a component of the strategic agenda."

Data Analysis

"Engage in analyses and research to determine the overall needs of postsecondary education and adult education in the Commonwealth."

Sources: About the Council: Who We Are - Ky. Council on Postsecondary Education, The Council's Role and Responsibilities (Handout), KRS 164.020.

KRS 164.295: History of Statutes Governing Comprehensive Universities

The legislation created in the Kentucky Postsecondary Education Improvement Act has been amended several times across the past two decades to incrementally expand the scope of comprehensive universities.

Each Senate Bill Amends KRs 164.295

1997

Kentucky Postsecondary Education Improvement Act

Included **KRS 164.295** which outlined which programs the six comprehensive state universities could provide, including **graduate programs with CPE's approval.**

2010

SB 127

Allowed comprehensive universities to offer **advanced practice doctoral (APD) degrees in nursing.**

2011

SB 130

Permitted comprehensive universities to offer up to **three APD degree programs** and an **Ed.D program,** specifying that comprehensive universities are **not allowed** to offer "first professional degrees" in medicine.

2012

SB 131

Removed the limit of three APDs and one Ed.D at individual institutions and set **a maximum of eighteen total advanced practice doctorates and Ed.Ds** for the six comprehensive universities, with at least two available for each institution.

2017

SB 147

Removed the cap of eighteen total APDs and Ed.Ds for comprehensive universities. Also removed "first professional degree" language and changed it to **doctoral degrees "required for professional practice and licensure…"** in fields including medicine and veterinary medicine.

These incremental changes to KRS 164.295, driven by individual institutions' interest in expanding program offerings, have **blurred the lines between the missions of higher education institutions in Kentucky** (research vs. comprehensive), contributed to an **unpredictable strategic environment**, and **created confusion around roles and responsibilities** for program review and approval at public institutions in Kentucky.

Sources: KRS 164.295; Chapter 80 (SB 127); CHAPTER 94 (SB 130); CHAPTER 29 (SB 131); CHAPTER 51 (SB 147, Givens and Wilson).

Legislative Recommendations

Legislative changes may be necessary to address the outcomes of the SJR 170 study. Moreover, the coordinating entity (CPE) should continue to be empowered to review and approve academic program decisions in the future, consistent with statute and in alignment with leading practices.

Clarify the Missions of Public Institutions in Statute *(SJR 170 Outcomes Dependent)*

- The missions of KY's public institutions may need to be reconsidered based on not only the outcomes of SJR 170, but also the changing nature of higher education in KY and the US more broadly.
- Statutory language should broadly set the mission for each institution, clarifying its place in the commonwealth, particularly with regards to research and doctoral programs, providing each institution with clarity, differentiation, and opportunities to innovate.

Ensure that the Coordinating Entity (CPE) is empowered to carry out its statutory role of defining and approving all academic programs

- With statute broadly defining mission for each institution, CPE should continue to be empowered to efficiently and effectively approve individual program proposals, as statute dictates.
- A clear separation of duties between the legislature and the coordinating entity is leading practice across US public higher education.
- The coordinating entity should be funded at a level that allows them to carry out their statutory responsibilities.

Sources: KRS 164.295 Programs of state and comprehensive universities -- Criteria for approval of advanced practice doctoral programs -- Review of doctorates -- Degrees a comprehensive university may not offer; KRS 164.020 Powers and duties of council.

EXECUTIVE SUMMARY

Process Overview and Recommendations

The project team interviewed university and CPE stakeholders to surface process strengths and challenges and reviewed academic program approval processes at 45 state systems or coordinating bodies to identify leading practices and inform a set of four recommendations.

Per KRS 164.020, the Council on Postsecondary Education (CPE) is the approving body for academic programs at Kentucky's public institutions.

CPE administers a new program approval process for all new programs that is **thorough, accessible,** and **encouraging of innovation.** CPE currently **requires additional documentation for Advanced Practice Doctorates (APD)** at comprehensive universities.

However, analysis, informed by both stakeholder feedback and industry leading practices, **surfaced several limitations of the current process, including:**

- Confusion around roles and decision-making authority
- Need for additional differentiation of process steps and external review for higher-risk proposals
- Lack of clarity around decision-making criteria
- Insufficient accountability for post-launch program performance

The following recommendations to address stakeholder concerns and improve the process are informed by benchmarking of 45 state systems' and coordinating boards' leading program review practices:

1. **Further Differentiate Proposal Requirements,** creating a different process for programs requiring "extraordinary consideration"
2. **Consider Requiring External Review,** including for proposals that deviate from an institution's historical scope or require significant financial investment
3. **Clarify Approval Criteria for Programs** to increase trust and transparency in the approval process
4. **Instill Accountability for New Program Performance,** ensuring that new programs deliver on their original goals and intent

University Commentary

Eastern Kentucky University | University Commentary

On November 19, 2024, the project team met with the Eastern Kentucky University (EKU) president and leadership team to brief them on the results of our feasibility study. At the conclusion of this briefing, the university was invited to provide commentary where they disagreed with a material element of the study, which points are captured below:

EKU asserts that the study's Clinical Placement Assessment does not appreciate the current restrictions on the institution's ability to secure an anchor partner prior to receiving statutory authority to launch the osteopathic school.

Murray State University | University Commentary

On November 19, 2024, the project team met with the Murray State University (Murray State) president and leadership team to brief them on the results of our feasibility study. At the conclusion of this briefing, the university was invited to provide commentary where they disagreed with a material element of the study, which points are captured below:

- Murray State asserts that the study's Cost-Benefit Analysis and its assumed 40 staff FTEs needed to operate the college of veterinary medicine (CVM) is overstated and does not reflect their intent of leveraging existing staff dedicated to animal care in the existing Hutson School of Agriculture and Breathitt Veterinary Center, centralized administrative staff, and student workers.
- Murray State asserts that the Workforce Alignment Assessment over-values the AVMA's assertion that there is no anticipated shortage of veterinarians and under-estimates the likelihood of Murray State graduates to practice in rural areas serving large animals.
- In relation to the Faculty Recruitment Assessment, Murray State cites recent successes in recruiting veterinarians at the Hutson School of Agriculture and Breathitt Veterinary Center as evidence that, despite the national shortage of veterinarian faculty, they will not experience significant challenges in this area.

Western Kentucky University | University Commentary

On November 19, 2024, the project team met with the Western Kentucky University (WKU) president and leadership team to brief them on the results of our feasibility study. At the conclusion of this briefing, the university was invited to provide commentary where they disagreed with a material element of the study, which points are captured below:

- WKU asserts that the Financial Health Assessment does not reflect recent progress in improving their financial position, specifically recent enrollment increases, modifications to financial management practices, and reduction of the discount rate.
- WKU asserts that the Cost-Benefit Analysis undervalues the potential of expanded eligibility for federal research funding, increased attractiveness to prospective students and faculty, expanded industry partnerships, and elevated institutional reputation that could result from the approval of a PhD in Data Sciences.

Kentucky State University | University Commentary

On November 19, 2024, the project team met with the Kentucky State University (KSU) president and leadership team to brief them on the results of our feasibility study. At the conclusion of this briefing, the university was invited to provide commentary where they disagreed with a material element of the study, which points the project team has represented below:

- KSU asserts that the study's Financial Health Assessment does not reflect the recent progress the institution has made towards the goals of the Management Improvement Plan, namely stabilizing cash flow, reinforcing financial policies, and improving Performance Funding metrics.
- Similarly, KSU asserts that the study's Student Success Assessment does not reflect recent improvements in student access and success, namely the creation of partnerships to expand affordability, dedicated initiatives to drive improved retention, and better-articulated undergraduate-to-graduate academic pathways.

Detailed Feasibility Studies

EKU | Doctoral Program for Professional Practice and Licensure in Osteopathic Medicine

Financial Health Assessment

Overall Feasibility Assessment

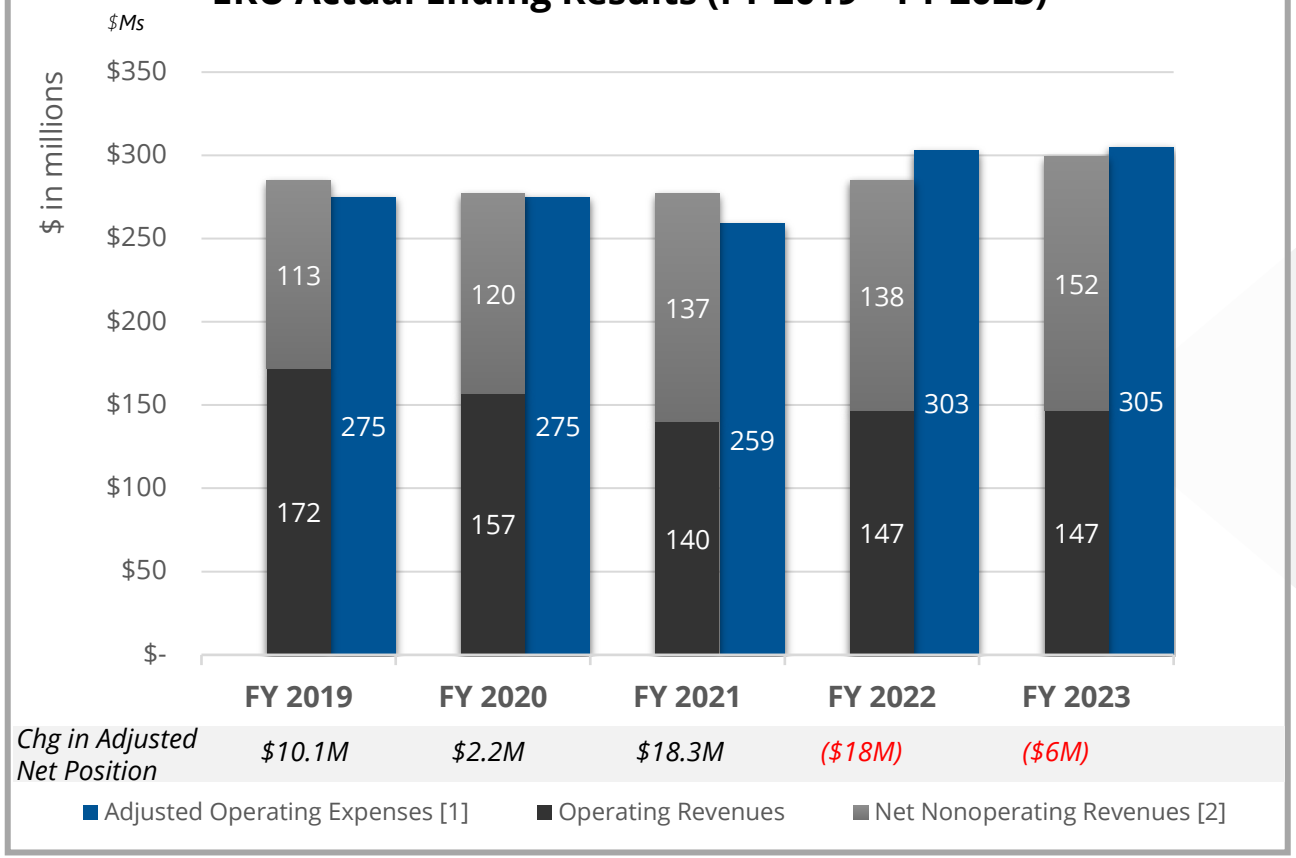
Financial Health 	Y	EKU's financial health assessment surfaced some risks from elevated debt levels that could jeopardize their ability to access funding and manage a significant new financial investment.

EKU | COLLEGE OF OSTEOPATHIC MEDICINE

Financial Health Assessment | Net Position

From Fiscal Year (FY)19 to FY21, EKU recorded positive changes in net position (from audited financial statements, adjusted to exclude Pension/Other Postemployment Benefits (OPEB) Expense Adjustments) ranging from $10.1M in FY19 to $18.3M in FY21. In recent years, slowed revenue growth and rising expenses have posed growing financial challenges.

EKU Actual Ending Results (FY 2019 – FY 2023)



Key Takeaways

EKU's total expenses decreased from $275M in FY2019 to $259M in FY2021, reflecting a 5.8% reduction during the COVID-19 pandemic. **Expenses have accelerated since FY2021, rising to $305M in FY2023**, representing a 17.8% increase in total expenses.

The main driver of revenues for EKU, **Net Tuition and Fees, has declined in recent years from $88M in FY 2019 to $81M in FY 2023.** In addition, Auxiliaries generated $20M in FY 2023, down from $26M in FY 2022. Moody's notes, "while EKU's enrollment growth has resumed post-pandemic…net tuition revenue growth remains constrained due to competitive dynamics and challenging demographics."

The main drivers of expenses for EKU, Instruction and Institutional Support[3], **have grown in recent years from $79M and $26M in FY 2019 to $90M and $44M in FY 2023 respectively.**

EKU has been able to keep total revenues balanced with total expenses through **increased State Appropriations and Federal/State Grants and Contracts.** These sources amounted to $145M in FY 2023, which was nearly 50% of all EKU revenues.

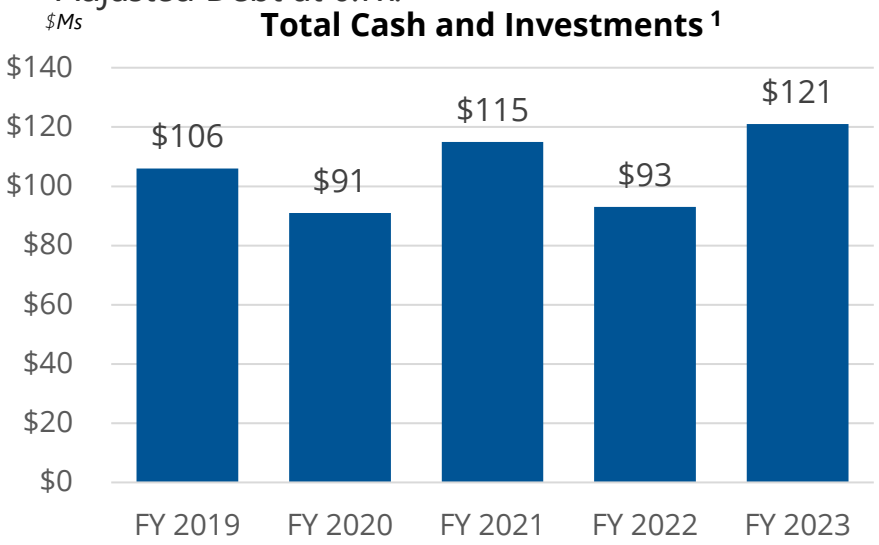
EKU has generally balanced growth in net position; however, the institution, along with most public institutions in KY, is facing growing financial pressure from slowed net tuition revenue growth and high fixed costs which limit its ability to better align revenues with expenses.

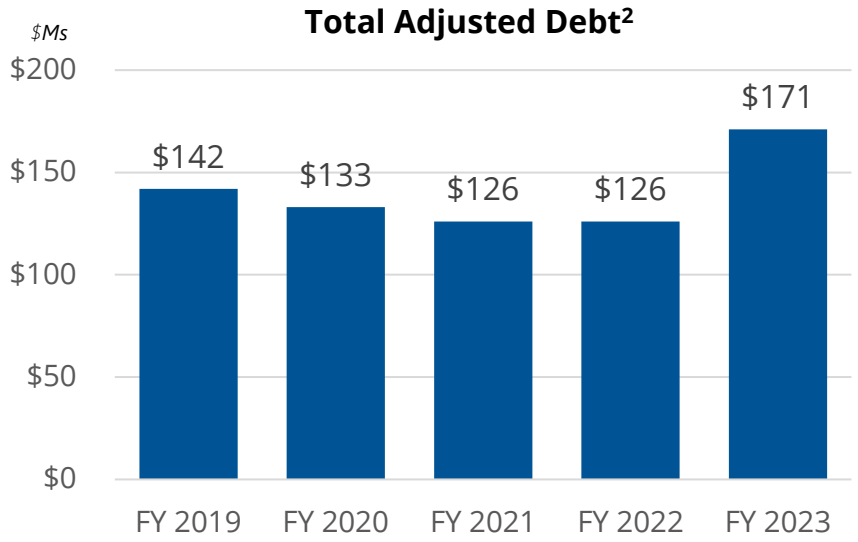
Notes: 1) Adjusted to not include Pension Expense Adjustments and OPEB expense adjustments; 2) Includes Net Nonoperating Revenues and Capital Appropriations; 3) Reflects administrative support for the University and includes noncapital maintenance expenses, technology support, legal, and other similar operational support costs. Sources: EKU Audited Financial Statements, Moody's Rating Report (Aug 2024)

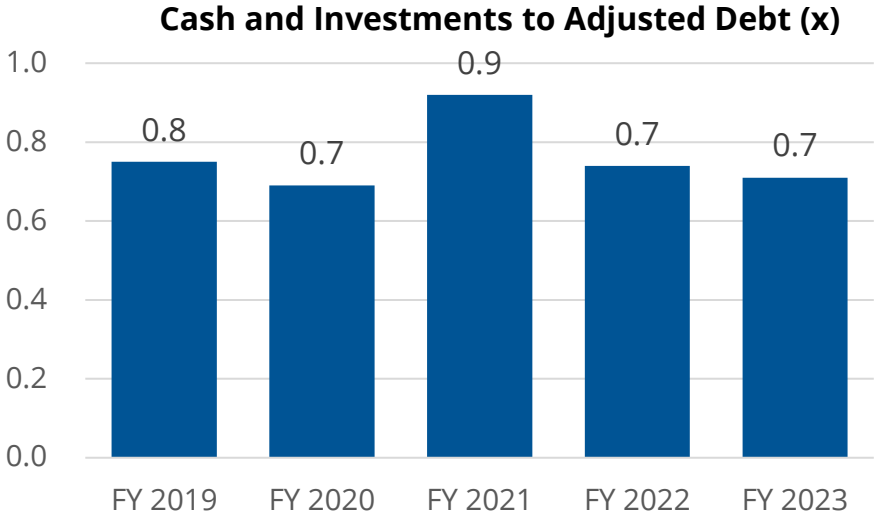
EKU | COLLEGE OF OSTEOPATHIC MEDICINE

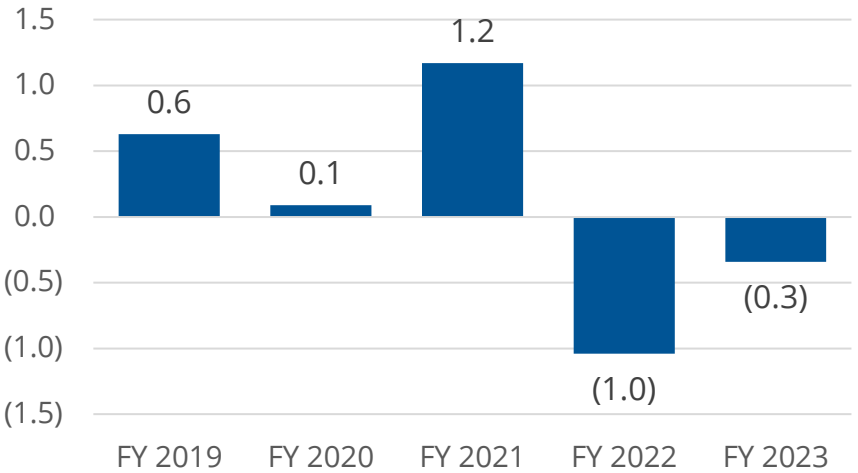
Financial Health Assessment | Balance Sheet Summary

EKU's balance sheet demonstrates some risks due to elevated leverage, with Total Cash and Investments (C&I) not being of equal magnitude to Total Adjusted Debt at 0.7x.









Key Takeaways

Growing Cash and Investments
Cash and Investments increased 14% from FY 2019 to FY 2023, demonstrating positive growth in recent years.

Growing Total Adjusted Debt
Total Adjusted Debt increased 20% from FY 2019 to FY 2023, outpacing growth in Cash and Investments. Moody's notes that much of this new debt was allocated towards capital uses.

Elevated Leverage Position
An elevated debt load that is now above total cash and investments has resulted in a Debt to C&I ratio below one of 0.7x. If EKU continues to operate at a deficit, this will challenge the institution's ability to grow Cash and Investments to strengthen its balance sheet and to make annual debt service payments.

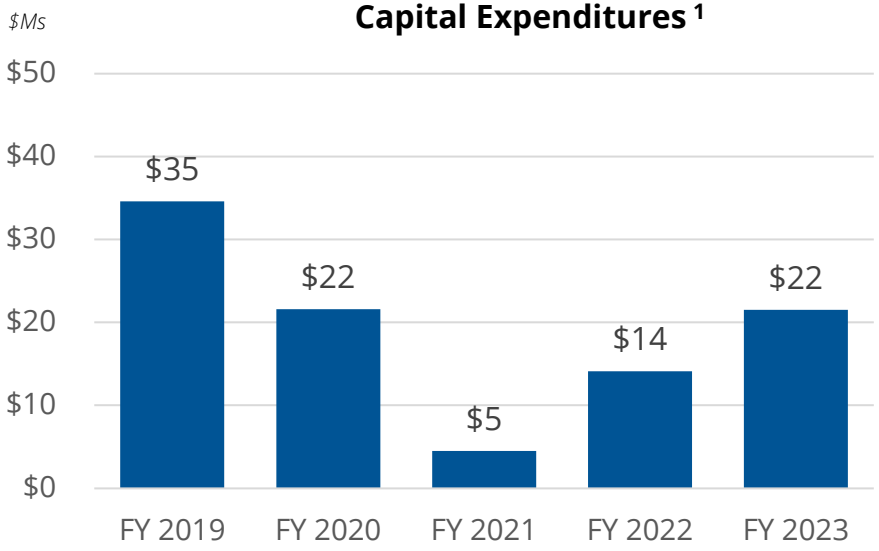
Notes: 1) Reflects Cash and Cash Equivalents, Restricted Cash and Cash Equivalents, Investments ; 2) Reflects Bonds Payable, Finance Purchase Obligations, RTU Current Lease Liability, RTU Current SBITA Liability, Bonds Payable (Noncurrent Portion), Finance Purchase Obligations (Noncurrent Portion), RTU Lease Liability, RTU SBITA Liability; 3) Reflects Principal Paid on Capital Debt, Interest Paid on Capital Debt, Interest Paid on Leased Assets. Sources: Audited Fin. Statement, Moody's Rating Report);

EKU | COLLEGE OF OSTEOPATHIC MEDICINE

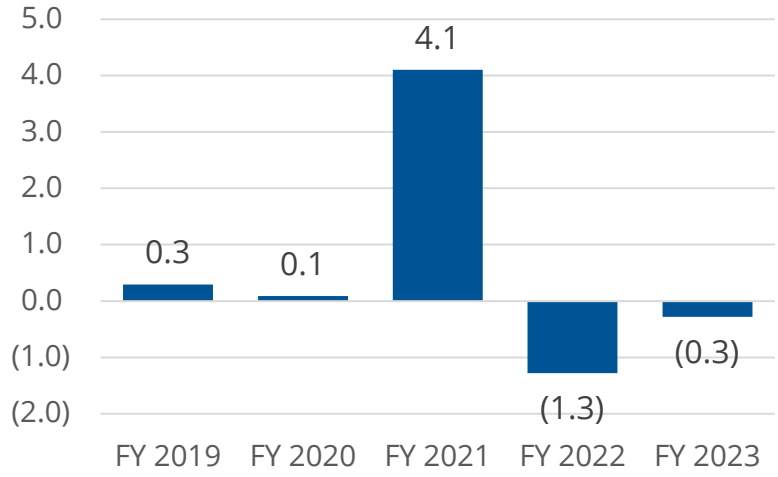
Financial Health Assessment | Capital Expenditures

Capital expenditures (CapEx) have increased from $5M in FY 2021 to $22M in FY 2023, driven by an increase strategic investments and state support.

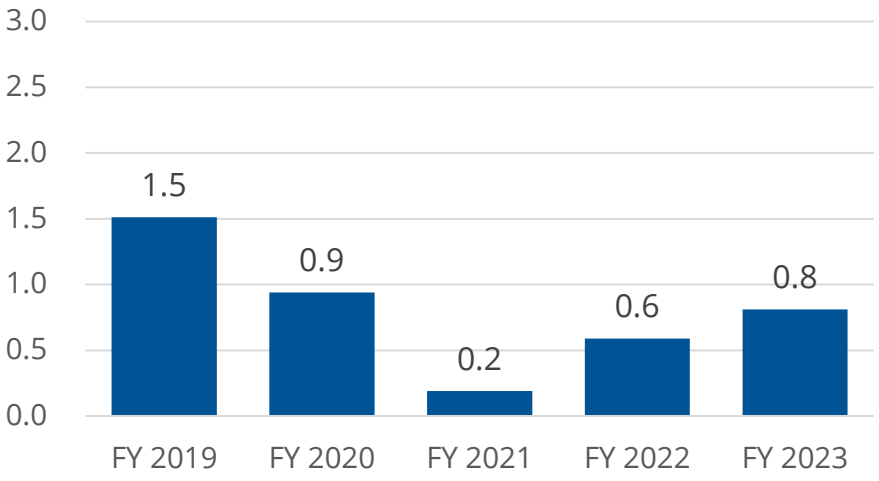
Capital Expenditures [1]



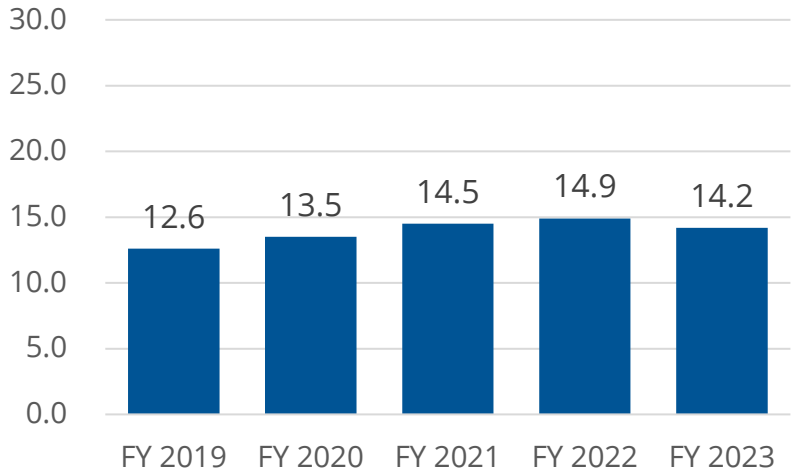
Change in Adjusted Net Position [2] to CapEx (x)



Capital Spending Ratio (x)



Average Age of Plant (Years)



Key Takeaways

Post-Pandemic Rebound in Capital Spending
Capital spending reached its lowest point at $5M in FY 2021 in the wake of the Covid-19 pandemic, but has been increasing since, reaching $22M in FY23.

Strategic Growth
The university's increase in strategic capital investments, aimed at new construction and campus renovations, have been bolstered by recent state support for new projects and deferred maintenance.

Managing Growth of Capital Planning
Moody's notes, "EKU now faces the need to fund the long-term fixed costs for debt support and rebuild reserves that were allocated for capital uses, a challenge given rising expense pressures and historically near balanced operations."

Notes: 1) Reflects Purchase of Capital Assets; 2) Adjusted to not include Pension/OPEB Expense Adjustments. Sources: EKU Audited Financial Statements; Moody's Rating Report (Aug 2024).

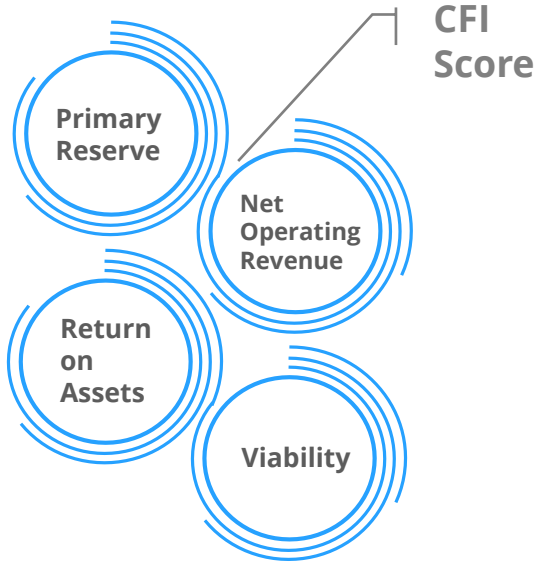
EKU | COLLEGE OF OSTEOPATHIC MEDICINE

Financial Health Assessment | Composite Financial Index (CFI)

EKU's Composite Financial Index (CFI) score of 1.84 in 2023 provides a point-in-time indicator of financial health and a "need to re-engineer" the institution.

The four ratios are **primary reserve, net operating revenue, return on assets, and viability**. These ratios **gauge the fundamental elements of the financial health** of an institution. The composite score reflects the overall relative financial health along a scale from **negative 4.0 to positive 10.0** for higher education institutions. A score **greater than 3 is considered relatively financially healthy**.

CFI Components



Key Ratios

Primary Reserve Ratio	$\frac{\text{expendable net assets}}{\text{total expenses}}$
Net Operating Revenue Ratio	$\frac{\text{net operating income}}{\text{total unrestricted operating revenues}}$
Return on Assets Ratio	$\frac{\text{change in net assets}}{\text{total net assets}}$
Viability Ratio	$\frac{\text{expendable net assets}}{\text{long-term debt}}$

EKU CFI Score[1,2]	Ratio	CFI Score
Primary Reserve	0.42x	1.12
Net Operating Revenue	-3%	-0.23
Return on Assets	3%	0.26
Viability	0.84x	0.71
Total	---	1.84

Notes: 1) Adjusted to not include Pension Expense Adjustments and OPEB expense adjustments; 2) Ratio calculations include Component Unit (CU) data. Sources: EKU Audited Financial Statements; Higher Learning Commission CFI Worksheet ; TIAA The Financial Resilience of Independent Colleges and Universities; State Higher Education Executive Officers Association.

Student Success Assessment

Overall Feasibility Assessment

Student Success

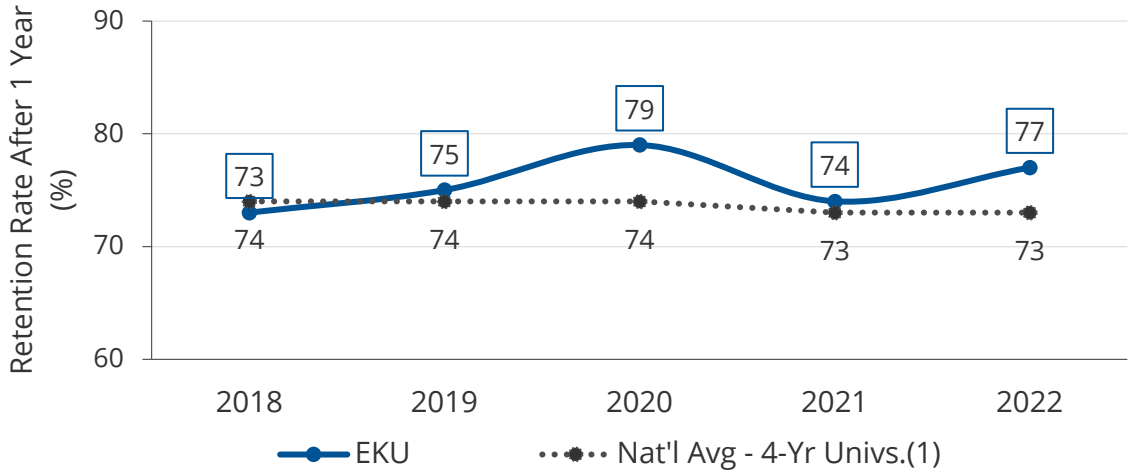
G

EKU currently outperforms other Kentucky regional comprehensives on first-time, full-time student retention. EKU has performed better than other KY public comprehensive institutions on five out of nine metrics tracked in the comprehensive funding model in the last five years.

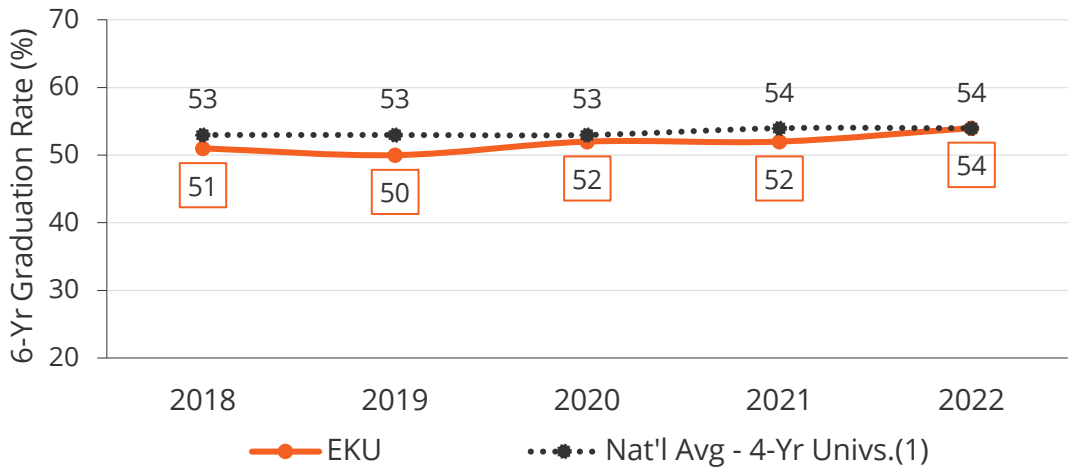
Current State Performance on Key Student Success Metrics

Eastern Kentucky University's undergraduate retention rates and graduation rates have demonstrated positive growth (despite modest declines during the COVID pandemic). EKU outperforms the national average in first-year retention.

EKU First-Year Retention Rate (First-Time, Full-Time Students)



EKU 6-Year Graduation Rate (First-Time, Full-Time Students)



Retention rates recovering and above national averages…

- First-to-second year retention rates for first-time, full-time students experienced an overall increase of four percentage points from Fall 2018 (73%) to Fall 2022 (77%).
- From Fall 2021 to Fall 2022, EKU's first-year retention increased three percentage points (77%), exceeding the national average by four percentage points and representing a return close to pre-pandemic highs.

…while graduation rates at a 5-year high

- The share of students receiving a bachelor's degree or equivalent within six years at EKU remained closely aligned with the national average between 2018 and 2022.
- EKU's graduation rate increased three percentage points from 51% in 2018 to 54% in 2022, which represented a five-year high for the institution.

Note: 1) National averages include all public and private not-for-profit four-year colleges and universities as reported in IPEDS. Source: IPEDS Data Dashboard.

EKU | COLLEGE OF OSTEOPATHIC MEDICINE

Current State Performance on the Comprehensive Funding Model

EKU performed better than the KY comprehensive average on five of the KPIs incentivized by the performance funding model.

CPE utilizes a performance-based funding model that aligns funding with institutional performance on desired state policy goals. After each institution receives their "funding floor", the remaining resources are distributed based on the funding formula:

35% *based on student success metrics* **35%** *based on course completions* **30%** *based on operational support.*[1]

From 2013-14 to 2022-23, EKU performed better than other KY public comprehensive institutions on **five out of nine KPIs:**

- Total Bachelor's Produced
- STEM+H[2] Bachelor's Produced
- Low Income Bachelor's Produced
- URM[3] Bachelor's Produced
- Progression at 30 Hours
- Progression at 60 Hours
- Progression at 90 Hours
- Student Credit Hours Earned
- FTE[4] Student Enrollment

- Despite performing worse than their peer group, performance on STEM+H Bachelor's, Progression at 30 hours, and Total Bachelor's Produced were within five percentage points of the average across KY comprehensives.

Key

- Performed better than or equivalent to KY comps average
- Performed worse than KY comps average

Notes: 1) Funding proportions were amended to 40% for student success metrics and 30% for course completions for the 2024-25 funding distribution; 2) Science, Technology, Engineering, Math, and Health Sciences (STEM+H); 3) Underrepresented Minority (URM); 4) Full-Time Equivalent (FTE). Sources: 13 KAR 2:120E; Performance Funding - Ky. Council on Postsecondary Education; KRS 164.092; Workbook: Kentucky Postsecondary Education Interactive Data Dashboard; Funding Model Data provided by CPE.

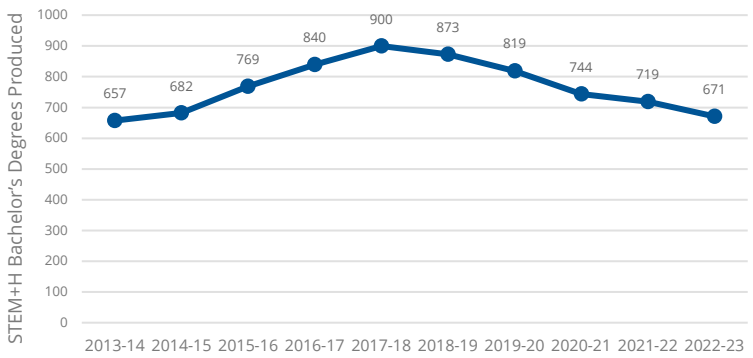
EKU | COLLEGE OF OSTEOPATHIC MEDICINE

Current State Performance on the Comprehensive Funding Model

EKU has grown its production of STEM+H and URM Bachelor's degrees. Its low-income bachelor's production growth has slowed, in line with other Kentucky comprehensives.

Data Trends

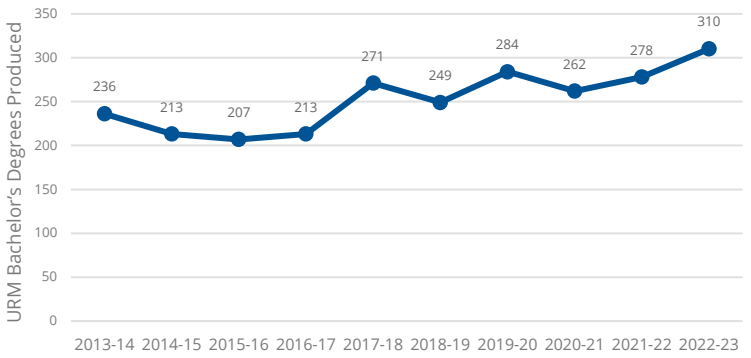
STEM+H Bachelor's Produced



2% EKU | **7%** KY Comps[2]

number of STEM+H Bachelor's produced from 2013-14 to 2022-23

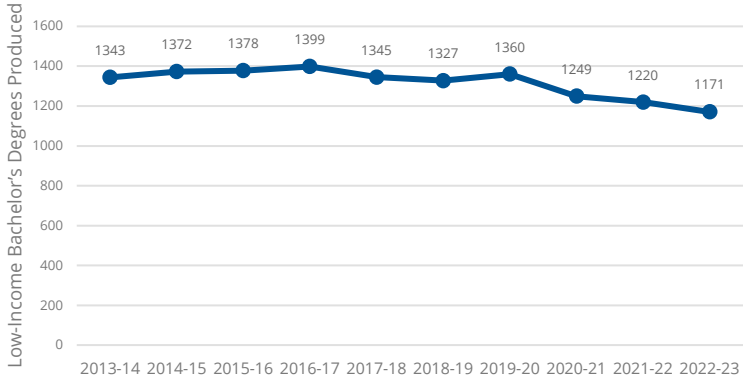
Underrepresented Minority Student (URM) Bachelor's Produced[1]



31% EKU | **23%** KY Comps

number of URM Bachelor's produced from 2013-14 to 2022-23

Low-Income Bachelor's Produced



13% EKU | **15%** KY Comps

number of Low-Income Bachelor's produced from 2013-14 to 2022-23

Notes: 1) The URM Bachelor's Degrees metric has been amended to "underrepresented students", defined as "first generation college students", for the 2024-25 funding distribution. 2) KY Comps refers to all six Kentucky public comprehensive universities: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University. Source: Funding Model Outcomes provided by CPE.

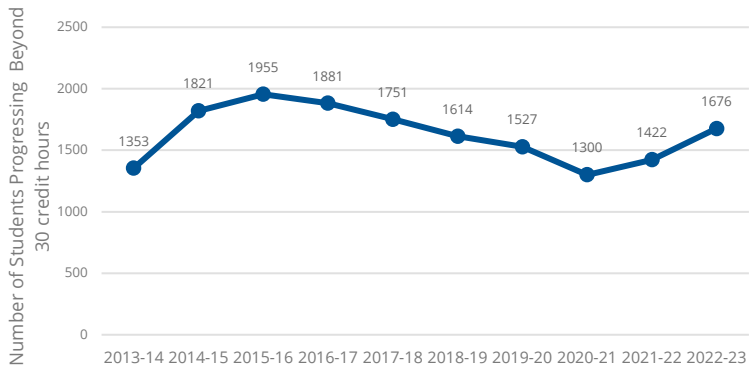
EKU | COLLEGE OF OSTEOPATHIC MEDICINE

Current State Performance on the Comprehensive Funding Model

While EKU has increased its progression at 30 hours, its progression at 60 and 90 hours has declined since 2013, reflecting broader trends across the KY comprehensives.

Data Trends

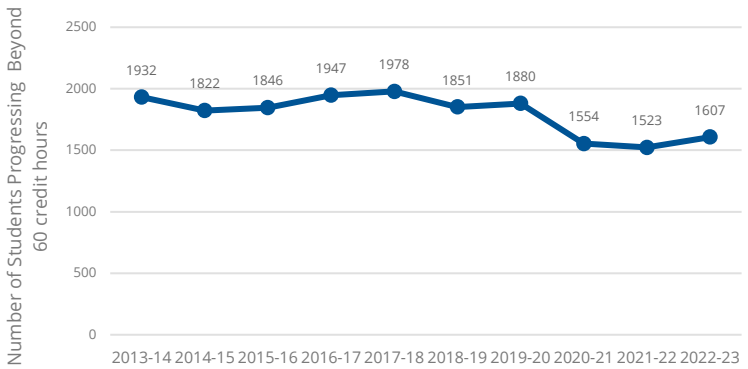
Progression @ 30 hours



24% EKU | **20%** KY Comps[1]

number of undergraduate students @ 30 hours from 2013-14 to 2022-23

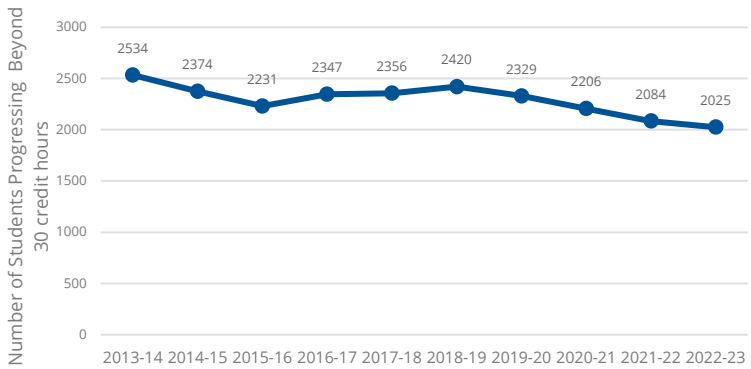
Progression @ 60 hours



17% EKU | **15%** KY Comps

number of undergraduate students @ 60 hours produced from 2013-14 to 2022-23

Progression @ 90 hours



20% EKU | **11%** KY Comps

number of undergraduate students @ 90 hours from 2013-14 to 2022-23

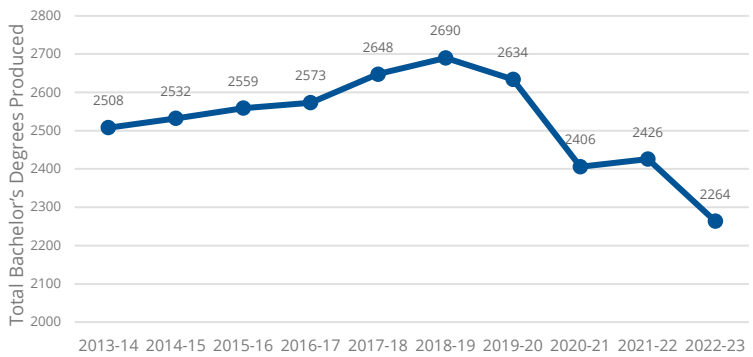
Note: 1) KY Comps refers to all six Kentucky public comprehensive universities: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University. Source: Funding Model Outcomes provided by CPE.

Current State Performance on the Comprehensive Funding Model

EKU's total volume metrics have experienced negative or slowed growth, although they've fared slightly better than KY comprehensives overall.

Data Trends

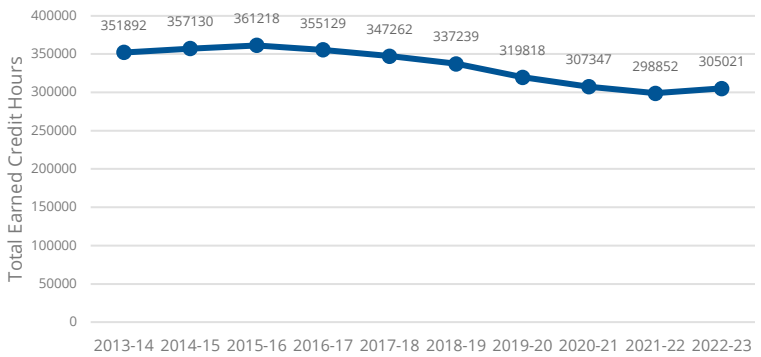
Total Bachelor's Produced



10% EKU | **8%** KY Comps[1]

number of Total Bachelor's produced from 2013-14 to 2022-23

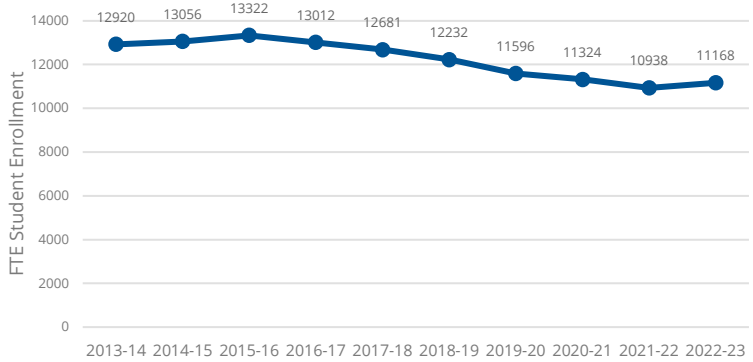
Student Credit Hours Earned



13% EKU | **16%** KY Comps

number of Student Credit Hours earned from 2013-14 to 2022-23

FTE Student Enrollment



14% EKU | **21%** KY Comps

number of FTE Student Enrollment from 2013-14 to 2022-23

Note: 1) KY Comps refers to all six Kentucky public comprehensive universities: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University. Source: Funding Model Outcomes provided by CPE.

Research Infrastructure Assessment

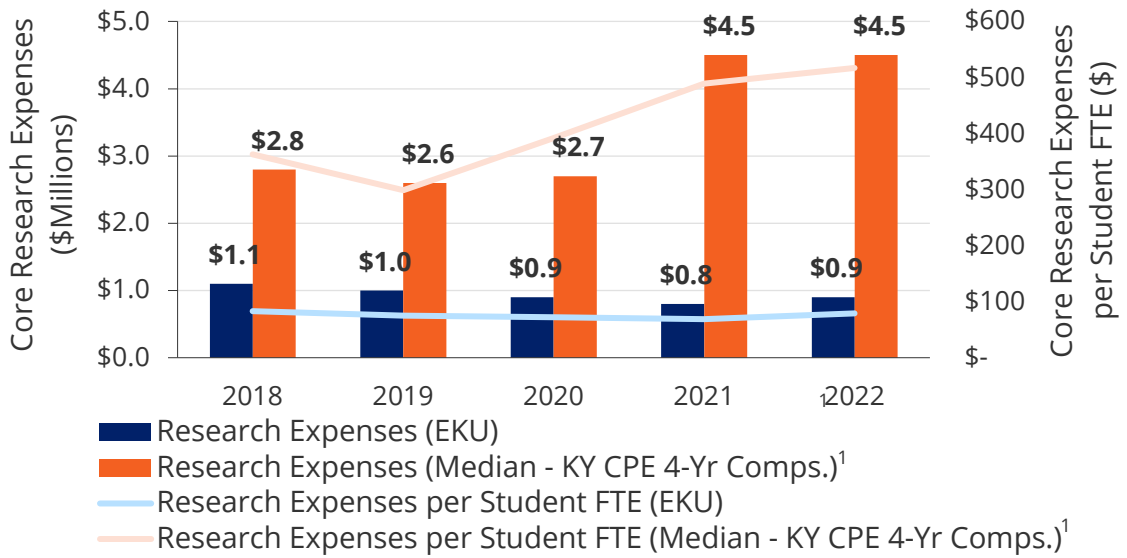
Overall Feasibility Assessment

Research Infrastructure 	Y	EKU's current research expenditures are low relative to the other KY comprehensive universities, though it has foundational infrastructure to support research growth, including a dedicated Office of Sponsored Programs.

Current State Research Infrastructure

EKU's current research expenditures are low relative to the other comprehensive universities in Kentucky, though it has foundational infrastructure to support research growth.

EKU Core Research Expenses (2018-2022)



EKU's total core research expenses decreased by 27% from 2018 to 2021. Although core research spending increased slightly from 2021 to 2022, total core research expenses still decreased by close to 20% over a 5-year period. Comparatively, EKU's research expenditures lags other Kentucky comprehensive universities.

Research Infrastructure Highlights

Central Office of Sponsored Programs

EKU has a dedicated Office of Sponsored Programs with 5 FTEs at present that manage the administration and compliance of grants and research. The Office of Sponsored Programs also hosts trainings for faculty and staff on pre-/post-award planning and management.

Undergraduate Research and Creative Endeavors (URCE)

URCE supports faculty-student mentorships to enhance learning and develop professional skills. It sponsors conference travel, mentorship opportunities, and scholarship programs for students. The program focuses on promoting research application, developing knowledge resources, and engaging the community through partnerships.

Note: 1) KY Comps refers to all six Kentucky public comprehensive universities: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University/ Sources: IPEDS Data Center, EKU's Office of Sponsored Programs; EKU's Undergraduate Research and Creative Endeavors.

Cost-Benefit Analysis

Overall Feasibility Assessment

Cost-Benefit Analysis 	G	The proposed EKU COM is resource-intensive but projected to generate surpluses under both moderate and conservative planning assumptions by FY31 without ongoing state support and is anticipated to generate significant economic impact in Madison County and KY more broadly.

EKU | COLLEGE OF OSTEOPATHIC MEDICINE

Assumptions Driving Financial Model

The COM timeline, EKU stakeholder discussions, market research, and COCA guidelines inform moderate and conservative drivers.

	Line Item	Forecast Approach	Moderate Driver	Conservative Driver
REVENUES	**Enrollment**	Market Research and COCA Guidelines	Enrollment ramp-up is defined by COCA Guidelines as the COM grows to a target capacity of 150 students per year. Annual attrition of 3% is calculated based on the MD Association of American Medical Colleges (AAMC) average.	Conservative capacity calculated as 85% of target. Conservative annual attrition rate estimated at 2 percentage points higher (5%).
	Tuition & Fees	EKU Proposal Materials, Market Research and Peer Comparisons	Tuition pricing is set at $45,000 and $65,000 for in-state and out-of-state students respectively in FY30 (provided by EKU) and is expected to grow at 3%. This pricing is competitive with its DO peers. Per EKU, there is no plan to offer additional scholarships or institutionally funded grants to admitted students.	Tuition pricing is set the same as the moderate scenario and is expected to grow at 2%.
	Other Revenues	EKU Proposal Materials, EKU Historical Trends, and Market Research	Revenues from Grants & Contracts are estimated at 3.3% of faculty wages based on analysis of peers with similar target enrollment. Operating Gifts are estimated at an increase of 5% of nongovernmental grants, contracts, and gifts from 2023 based on analysis of peers with similar target enrollment.	Conservative contribution rates for Operating Gifts and Grant & Contracts estimated at 1 percentage point lower than moderate scenario.
EXPENSES	**Faculty and Staff Salary and Benefits**	EKU Proposal Materials, Market Research and Peer Comparisons	Faculty and staff headcounts and salaries calculated based on analysis of peers with similar target enrollment. EKU is estimated to need to hire 8 administrators, 19 faculty, and 54 staff. Gradual hiring timeline is aligned with COCA guidelines and student enrollment ramp-up. Personnel salaries forecast a 2.7% annual increase, based on the 10-year average of annual inflation rates from the Bureau of Labor Statistics/ Consumer Price Index. Employee Benefits are projected at 33% of compensation, in line with existing EKU Operations.	Conservative personnel costs estimated at 15% higher than moderate scenario. Conservative annual growth rate estimated at 4% based on 5-year average of annual inflation rates from the Bureau of Labor Statistics/ Consumer Price Index. Employee Benefits are projected at the same rate as the moderate scenario.
	Faculty Start-up Packages	Market Research	Start-up Packages are assumed to be ~$100k per faculty FTE based on analysis of peer operations.	Conservative start-up Packages are estimated at 15% higher than moderate scenario.
	Rotation Payments	EKU Proposal Materials	Rotation payments expense estimates were shared by EKU and assume four rotations per student per year and a $2.4k fee per rotation. The moderate scenario uses the low end of the range provided by EKU.	Conservative fee per rotation estimated based on upper range of annual estimate provided by EKU.
	All Other Operating Expenses	COCA Guidelines and Market Research	Includes COCA accreditation fees including new COM Application Fee ($107,000), Maintain Application Annual Fee ($80,250), Candidate State Application Fee ($107,000), Maintain Candidate Status Annual Fee ($53,500), Pre-Accreditation Application Fee ($53,500), Maintain Pre-Accreditation Status Annual Fee ($53,500), and Maintain Accreditation Status Annual Fee per COCA ($48,150).	Same assumptions as moderate model.
	Facilities Expense	EKU Proposal Materials and Market Research	Facility Operating Expense (OpEx) is estimated using Gross Square Feet (GSF) plans provided by EKU and OpEx per GSF calculated through peer benchmarking.	Conservative rate for Facilities OpEx per GSF estimated at 15 percent higher than moderate scenarios.
	Depreciation	EKU Proposal Materials and Market Research	New COM building assumed to be straight-line depreciated with useful life of 40 years for the building per GAAP with depreciation beginning in FY30 post completion of construction.	Same assumptions as moderate model.
RESERVES	**Reserves**	COCA Guidelines	Escrow & Reserve Requirements including the unwind upon graduation of the 1st class are defined by COCA. Escrowed reserved fund ($39M) calculated by the highest tuition ($65,000) multiplied by the approved number of students (150) for the proposed COM multiplied by 4 years. Operating reserve fund ($9.75M) is equal to one-quarter of the escrowed reserve fund. EKU estimated an additional $7.5M in initial operating costs from the General Assembly.	Same assumptions as moderate model.

Sources: American Osteopathic Association's Commission on Osteopathic College Accreditation (COCA) New & Developing Accreditation Standards 2023; U.S. Bureau of Labor Statistics; University Websites.

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Staffing and Enrollment Assumptions

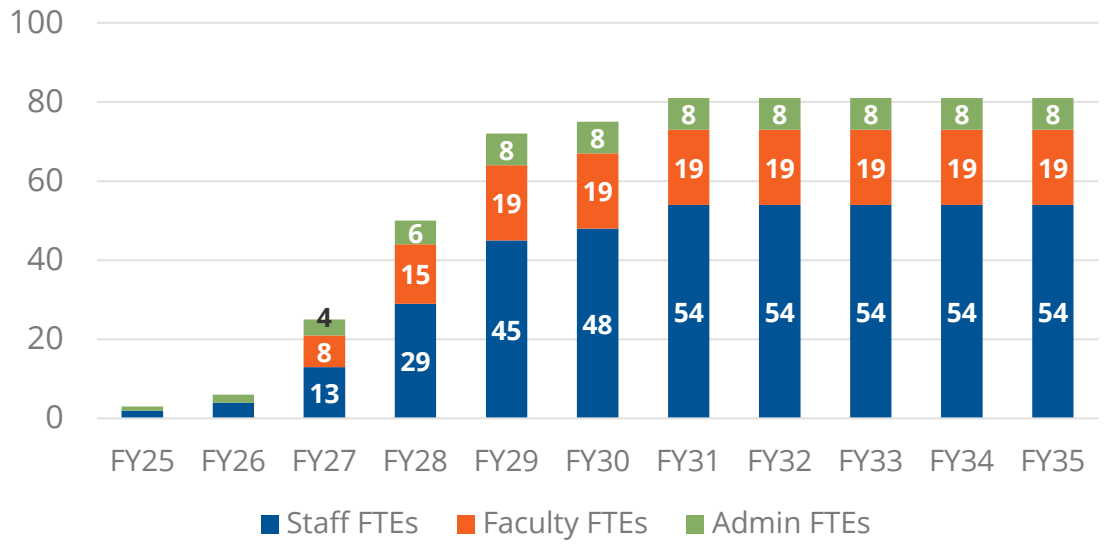
Faculty and staff, beginning with the Founding Dean, ramp up to support operations and anticipated enrollments as the COM matures to steady state operations in FY2035 and beyond.

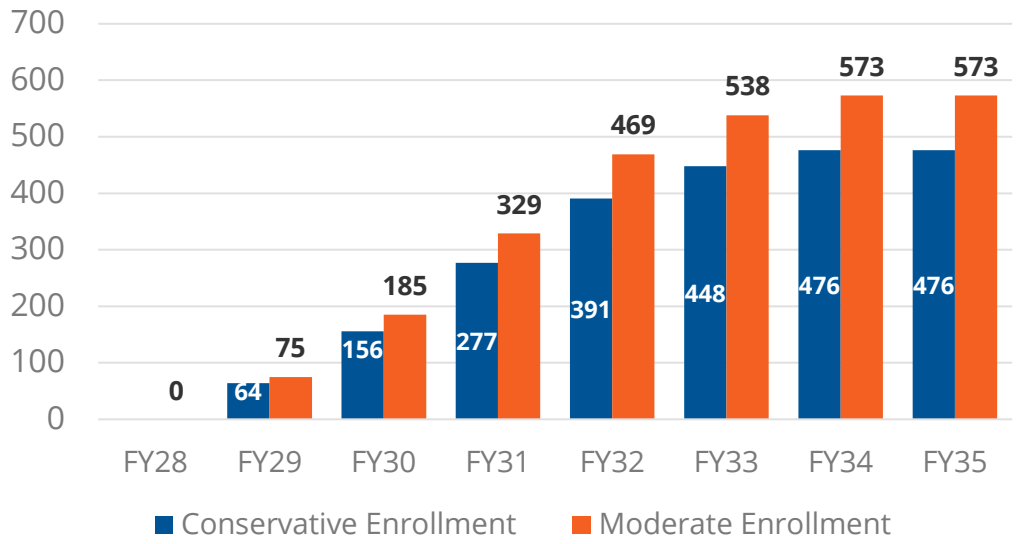
Faculty and Staff Ramp-up, FY28 – FY35

- The COM Founding Academic Dean is hired and brought on board in FY25
- Initial faculty are hired starting in FY27 and the required 19 FTEs are in place by FY29.
- Staff includes Finance, IT, Academic Affairs, Research, Student Affairs, Professional Development, Clinical Affairs, and Clinical Education professionals.

Enrollment Ramp-up, FY29 – FY35[1]

- According to COCA guidelines, a pre-accredited COM may accept and matriculate students only in the following progressive enrollment:
  - Year 1 – No more than 50% of the approved class size;
  - Year 2 – No more than 75% of the approved class size; and
  - Years 3 and 4 – No more than 100% of the approved class size.
- In the moderate scenario, the first class begins in FY29 at 75 Students and reaches steady-state of four full classes of 150 students by FY35.





Notes: 1) Enrollment at "steady-state" does not reach 600 as the model moderately assumes anticipated annual attrition of 3%, in line with the reported MD Association of American Medical Colleges (AAMC) average.

Moderate Projection – COM Pro-forma Operating Results

The operating results[1] in the moderate projection represents the most likely scenario with many estimates provided directly by EKU.

Income Statement - Moderate Scenario *$000s*	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
Enrollment - DO	-	-	-	-	75	185	329	469	539	573	573
Faculty FTEs	-	-	8	15	19	19	19	19	19	19	19
Staff FTEs	2	4	13	29	45	48	54	54	54	54	54
Administrator FTEs	1	2	4	6	8	8	8	8	8	8	8
Revenues:											
Tuition & Fees	$ -	$ -	$ -	$ -	$ -	$ 9,955	$ 18,082	$ 26,445	$ 31,236	$ 34,228	$ 35,260
Other Operating Revenues:											
Grants & Contracts	-	-	-	-	-	322	343	351	361	372	383
Operating Gifts	-	-	-	-	-	235	242	249	256	264	272
Total Operating Revenues	-	-	-	-	-	10,512	18,667	27,045	31,854	34,865	35,915
Operating Expenses:											
Faculty and Staff Salaries	307	632	2,665	5,095	7,115	7,485	7,986	8,226	8,473	8,727	8,989
Start-up Packages	-	-	-	1,639	450	-	-	-	-	-	-
Employee Benefits	110	227	959	1,834	2,561	2,695	2,875	2,961	3,050	3,142	3,236
Rotation Payments	-	-	-	-	-	-	696	1,760	2,530	2,969	3,049
Other Operating Expenses	187	187	107	54	54	54	54	54	48	48	48
Facilities Expense	-	-	-	-	-	1,356	1,378	1,399	1,422	1,460	1,499
Total Operating Expense	604	1,046	3,732	8,621	10,180	11,589	12,988	14,400	15,523	16,345	16,821
Operating EBIDA	$ (604)	$ (1,046)	$ (3,732)	$ (8,621)	$ (10,180)	$ (1,077)	$ 5,679	$ 12,645	$ 16,331	$ 18,519	$ 19,094
Operating EBIDA Margin %	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*-10.2%*	*30.4%*	*46.8%*	*51.3%*	*53.1%*	*53.2%*
Depreciation & Amortization	-	-	-	-	-	2,957	2,957	2,957	2,957	2,957	2,957
Depreciation & Interest Expense	-	-	-	-	-	2,957	2,957	2,957	2,957	2,957	2,957
Operating Income	$ (604)	$ (1,046)	$ (3,732)	$ (8,621)	$ (10,180)	$ (4,034)	$ 2,722	$ 9,688	$ 13,374	$ 15,563	$ 16,137
Operating Margin %	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*-38.4%*	*14.6%*	*35.8%*	*42.0%*	*44.6%*	*44.9%*
Non Operating Income:											
State Appropriations	-	7,500	-	-	-	-	-	-	-	-	-
Total Non Operating Income:	$ -	$ 7,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Net Surplus/(Deficit) -	$ (604)	$ 6,454	$ (3,732)	$ (8,621)	$ (10,180)	$ (4,034)	$ 2,722	$ 9,688	$ 13,374	$ 15,563	$ 16,137
Net Surplus/(Deficit) %	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*-38.4%*	*14.6%*	*35.8%*	*42.0%*	*44.6%*	*44.9%*

Key Takeaways

- **Operating Income Driven by Tuition Revenues:** Revenues are driven by tuition and fees, which **reach $35M by FY35** as the COM nears full enrollment capacity.
- **Largest Expenses Due to Faculty and Staff Salaries and Benefits:** Salaries and benefits are forecasted to be the primary cost driver at steady-state, with **>$8M in estimated salaries spend by FY32**.
- **Program Projected to Breakeven in FY31 and Generate Positive Contribution Margins Thereafter:** The COM is expected to generate positive margins beginning in FY31 under the moderate scenario. These margins can be reinvested in the program or other EKU strategic priorities. This is in-line with operating performance expectations from other US DO schools.

Note: 1) Assumptions detailed earlier in this section of the report on Slide 45.

Conservative Projection – COM Pro-forma Operating Results

The operating results[1] in the conservative projection represents the financial impact of a "worst case" scenario.

Income Statement - Conservative Scenario *$000s*	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
Enrollment - DO	-	-	-	-	64	156	277	391	448	476	476
Faculty FTEs	-	-	8	15	19	19	19	19	19	19	19
Staff FTEs	2	4	13	29	45	48	54	54	54	54	54
Administrator FTEs	1	2	4	6	8	8	8	8	8	8	8
Revenues:											
Tuition & Fees	$ -	$ -	$ -	$ -	$ -	$ 8,459	$ 15,100	$ 21,674	$ 25,275	$ 27,390	$ 27,945
Net Tuition Revenue	-	-	-	-	-	8,459	15,100	21,674	25,275	27,390	27,945
Other Operating Revenues:											
Grants & Contracts	-	-	-	-	-	298	321	334	347	361	376
Operating Gifts	-	-	-	-	-	188	193	199	205	211	218
Total Operating Revenues	-	-	-	-	-	8,945	15,615	22,207	25,828	27,963	28,539
Operating Expenses:											
Faculty and Staff Salaries	353	733	3,125	6,031	8,505	9,034	9,732	10,122	10,527	10,948	11,386
Start-up Packages	-	-	-	2,049	563	-	-	-	-	-	-
Employee Benefits	116	242	1,031	1,990	2,807	2,981	3,212	3,340	3,474	3,613	3,757
Rotation Payments	-	-	-	-	-	-	889	2,258	3,291	3,910	4,067
Other Operating Expenses	187	187	107	54	54	54	54	54	48	48	48
Facilities Expense	-	-	-	-	-	1,545	1,571	1,597	1,623	1,688	1,756
Total Operating Expense	656	1,163	4,263	10,124	11,928	13,613	15,457	17,370	18,963	20,207	21,013
Operating EBIDA	$ (656)	$ (1,163)	$ (4,263)	$ (10,124)	$ (11,928)	$ (4,669)	$ 157	$ 4,837	$ 6,865	$ 7,756	$ 7,525
Operating EBIDA Margin %	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*-52.2%*	*1.0%*	*21.8%*	*26.6%*	*27.7%*	*26.4%*
Depreciation & Amortization	-	-	-	-	-	3,400	3,400	3,400	3,400	3,400	3,400
Depreciation & Interest Expense	-	-	-	-	-	3,400	3,400	3,400	3,400	3,400	3,400
Operating Income	$ (656)	$ (1,163)	$ (4,263)	$ (10,124)	$ (11,928)	$ (8,069)	$ (3,243)	$ 1,437	$ 3,465	$ 4,356	$ 4,125
Operating Margin %	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*-90.2%*	*-20.8%*	*6.5%*	*13.4%*	*15.6%*	*14.5%*
Non Operating Income:											
State Appropriations	-	7,500	-	-	-	-	-	-	-	-	-
Total Non Operating Income:	$ -	$ 7,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Net Surplus/(Deficit) -	$ (656)	$ 6,337	$ (4,263)	$ (10,124)	$ (11,928)	$ (8,069)	$ (3,243)	$ 1,437	$ 3,465	$ 4,356	$ 4,125
Net Surplus/(Deficit) %	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*-90.2%*	*-20.8%*	*6.5%*	*13.4%*	*15.6%*	*14.5%*

Key Takeaways

The delta between moderate and conservative is driven by the following key assumptions:

1. Lower than expected enrollments driving lower tuition revenues: **$1.3M impact in FY32**
2. Higher than expected faculty salaries needed to attract and retain quality faculty: **~$0.6M impact in FY32**
3. Higher than expected clinical rotation payments to fulfill curricular requirements: **~$1.1M impact in FY32**

The conservative scenario also assumes expenses will grow at higher than historical rates (4.7% vs. 2% annually).

The resulting net surplus assumes all conservative assumptions are triggered.

Note: 1) Assumptions detailed earlier in this section of the report on Slide 45.

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Potential COM Effects on Regional Economy

A College of Osteopathic Medicine at EKU would not just help to source a new, in-demand revenue stream, but also provide a substantial economic benefit to the surrounding region.

A COM may generate significant economic impact:

$102M One-Time **$16.7M** Annual Recurring — Economic Impact In Madison County

Based on estimated hiring needs (i.e., new jobs), a new COM is estimated to generate $16.7M in economic output in Madison County, including an estimated $8.3M in labor wages associated with 117 total jobs annually (direct + indirect and induced).

Capital projects planned in conjunction with the COM launch are estimated to support a total of 931 jobs during the period of construction ($44.1M in labor income) and generate a total of $102.1M in economic output.

$134M One-Time **$24.0M** Annual Recurring — Economic Impact In Kentucky

Based on estimated hiring needs (i.e., new jobs), a new COM is estimated to generate $24M in economic output in Kentucky, including an estimated $10.3M in labor wages associated with 139 total jobs annually (direct + indirect and induced).

Capital projects planned in conjunction with the COM launch are estimated to support a total of 980 jobs during the period of construction ($58.3M in labor income) and generate an additional $134.1M in economic output.

A new osteopathic medical school may also:

- **Address workforce needs** by increasing the number of highly qualified doctors who have regional connections and interests in the Commonwealth of Kentucky.
- **Expand health-care access** for underserved populations. As a result, the quality of life for community residents improves as well as the ability to leverage health-care cost savings.
- **Anchor innovation economy** whereby companies are launched in and attracted to the region; new jobs are created; and research sparks technology transfer, commercialization, and economic value.

Sources: IMPLAN Model, 2022 Data Year, using inputs provided by EKU and IMPLAN model data for the State of Kentucky and Madison County

Student Demand

Overall Feasibility Assessment

Student Demand

G

Student demand for seats in COMs is high, even amid growth in the program pipeline as new COMs launch.

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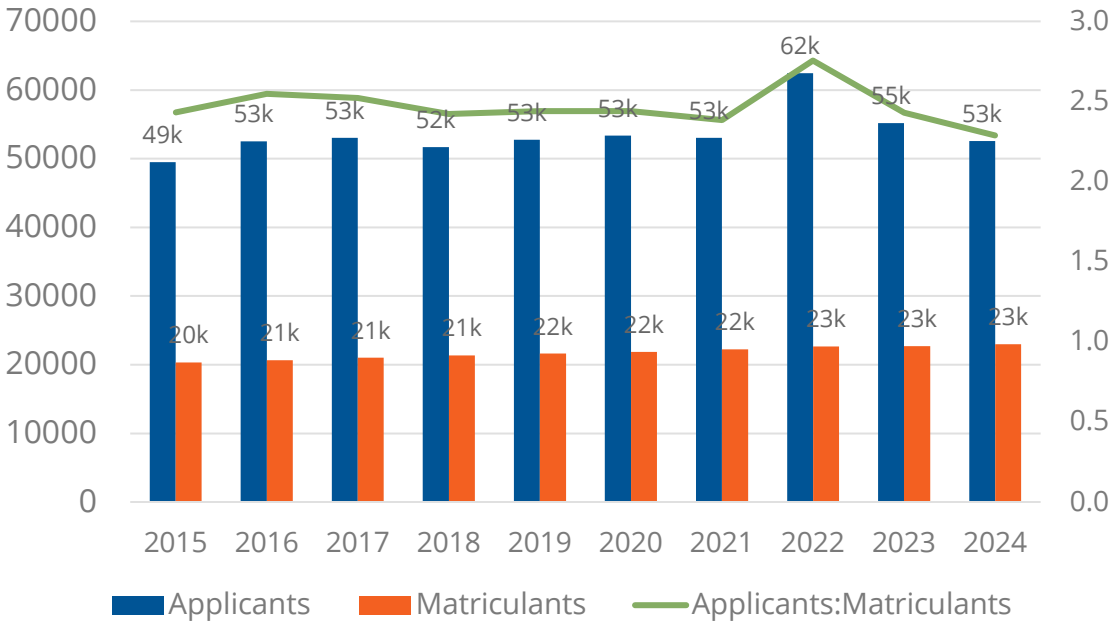
National & Regional Medical School Demand

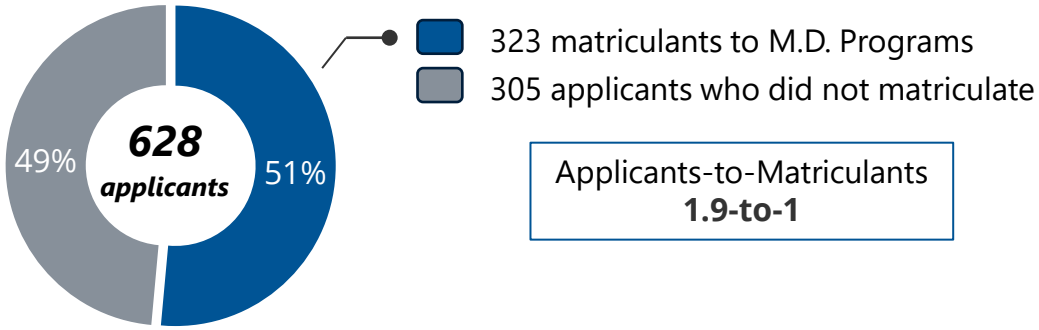
Nationally, Student Demand for Seats in Medical Schools (MD and DO) Outpacing Supply

Over the last decade, the AAMC reported a 6.26% rise in total applicants to national medical schools, while the number of matriculants increased by 13%.[1] **In 2023, only 43% of applicants matriculated to US medical schools**.

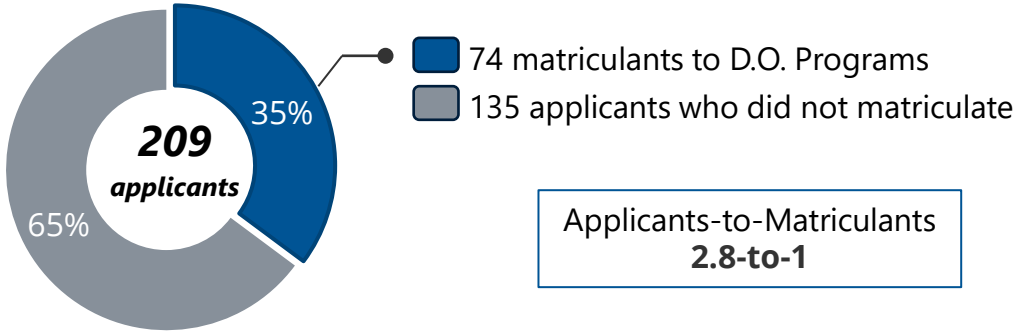


In Kentucky, Medical School Demand Mirrors National Trends, with Large Applicant Pools for Small Number of Seats

In 2023, 628 Kentucky residents applied to M.D. Programs [2]



In 2022, 209 Kentucky residents applied to D.O. Programs [3]



Notes: 1) Applicant: An individual who has formally submitted an application to a program of study at an educational institution, seeking admission for a specific academic term. Matriculant: An individual who has been admitted to a program of study at an educational institution and has officially enrolled in courses for the specified academic term; 2) The most recent data available for MD applicants and matriculants is from 2022; 3) The most recent data available for DO applicants and matriculants is from 2023. Sources: AAMC; AACOM; 2023 FACTS: Applicants and Matriculants Data | AAMC; AACOM 2022 Applicant and Matriculant Report.

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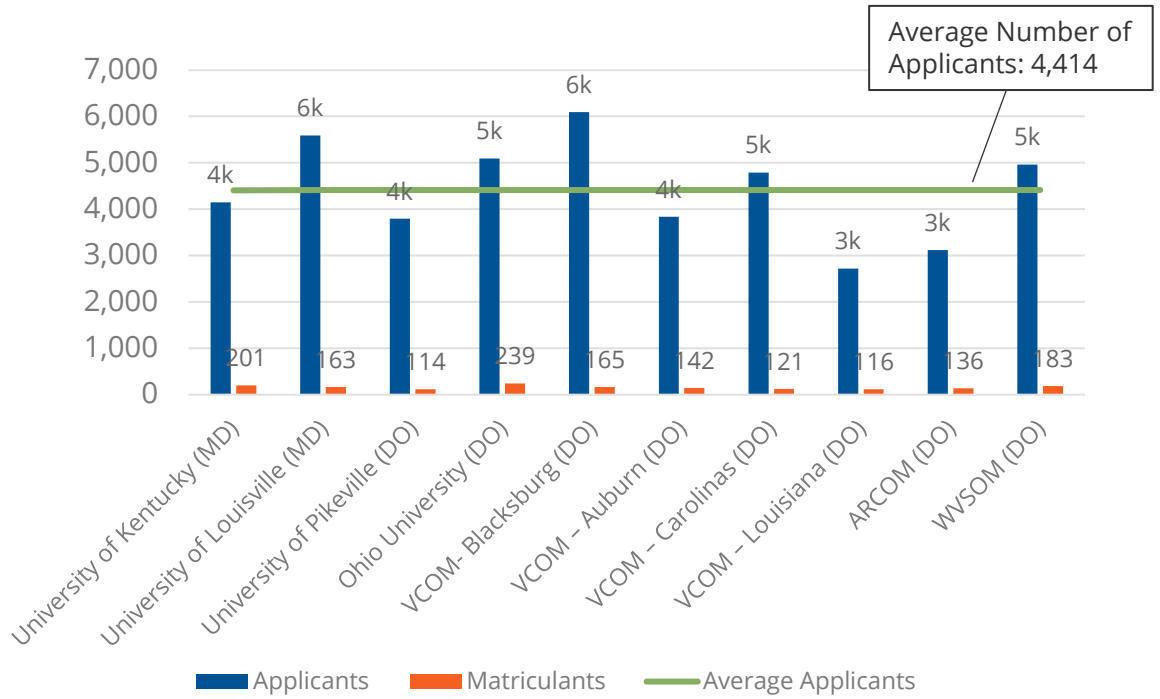
Select Peer Admissions Statistics

Peer Applicants and Matriculants

Among select peer medical education programs (MD and DO), the **average number of applications exceeded 4,414 in the most recently reported entering year**. By comparison, average matriculants totaled less than 158 students. Data for peer DO schools is based on the most recent published AACOM data for the 2022 entering year. Data for peer MD schools is based on the most recent published AAMC data for the 2023 entering year.

Average Applicants and Matriculants at Peer Institutions



Recently Opened Colleges of Osteopathic Medicine

Institution	Year Opened	Applicants (*first year*)	Matriculants (*first year*)
University of the Incarnate Word (TX)	2017	3,403	162
Noorda College (UT)	2021	1,277	89
Kansas Health Sciences University (KS)	2022	994	90
Baptist Health Sciences University (TN)	2024	1,863	81
Duquesne University (PA)	2024	2,725	91

Recently established medical schools are experiencing high application volumes relative to their class sizes, suggesting that, to this point, demand for seats in DO programs continues to outpace supply.

Sources: AAMC Applications & Matriculants, 2023;, AACOM Applicants & Matriculants 2022, Institutional websites AY22-23 1st year COA., Applicants & Matriculants by Gender and COM 2009-2024 | AACOM

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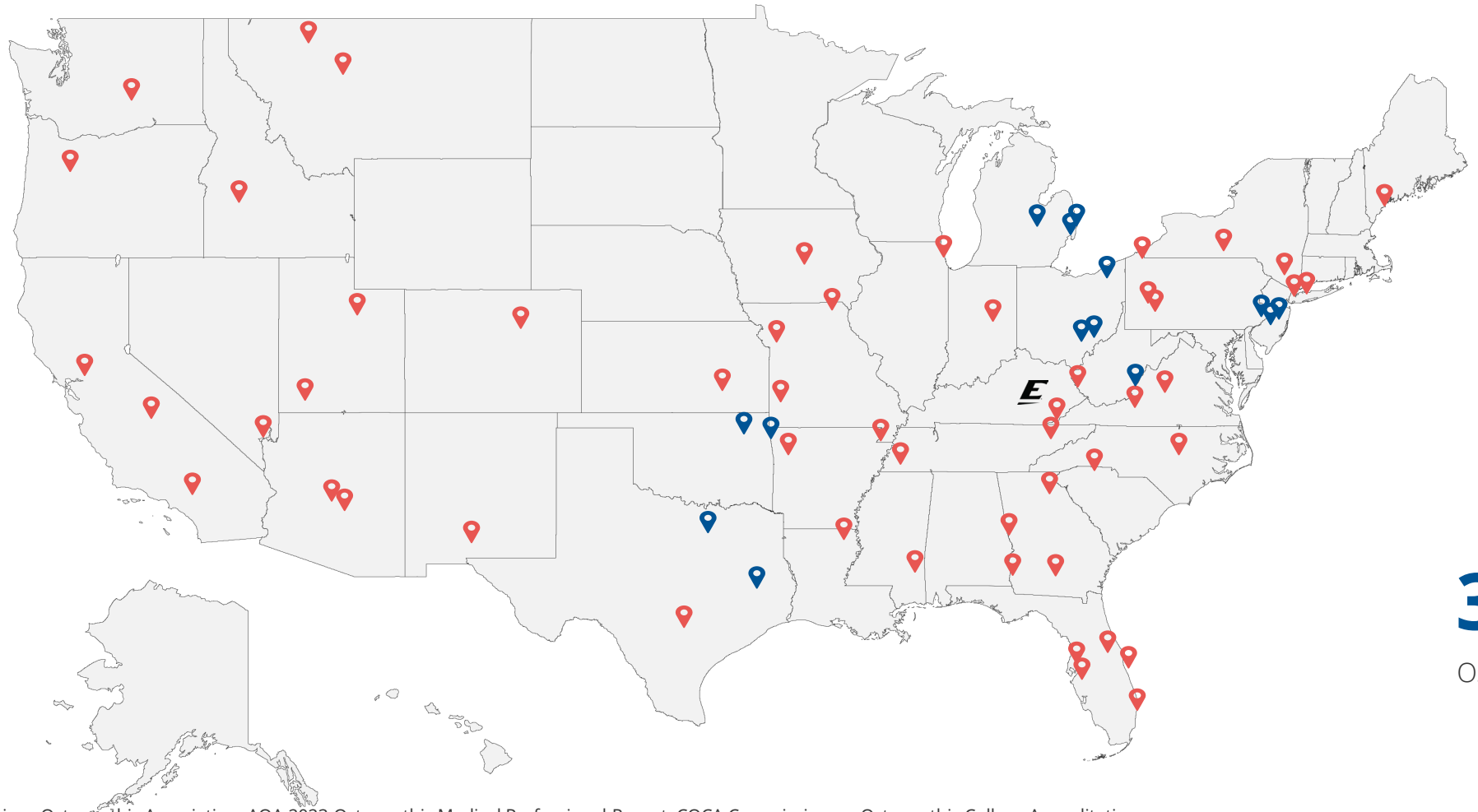
Landscape of Osteopathic Medical Schools

The Commission on Osteopathic College Accreditation (COCA) accredits 42 Colleges of Osteopathic Medicine (COMs) which offer instruction at 67 teaching locations. Additionally, there are currently eleven new COMs in various stages of development (not included on map below).

Fully Accredited COMs as of 2024 at all Teaching Locations



1 in 4

U.S. medical students attends an osteopathic medical school

36,500

Osteopathic medical students in the US as of 2024

Sources: American Osteopathic Association; AOA 2023 Osteopathic Medical Professional Report, COCA Commission on Osteopathic College Accreditation

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Timeline of New DO Programs

Eleven new colleges of osteopathic medicine are currently in various stages of development. Six of those have welcomed their inaugural classes, though they have not yet achieved full accreditation status.

2021

- **Noorda College (UT):** Pre-accredited

2022

- **Kansas Health Sciences University(KS) :** Pre-accredited

2024

- **Orlando College (FL):** Pre-accredited
- **Duquesne University (PA):** Pre-accredited
- **Baptist Health Sciences University (TN):** Pre-accredited

2025

- **Meritus College (MD):** Pre-accredited
- **D'Youville University (NY):** Candidate
- **Morgan State University (MD):** Status N/A

2026

- **University of Northern Colorado (CO):** Candidate
- **Illinois College (IL):** Candidate

2027

- **Indiana University of Pennsylvania (PA):** Status N/A

Assuming each COM will enroll ~150[1] seats per class, there will be an estimated **additional 1,650 first-year DO seats** in US COMs within the next 3 years.

The accreditation of all 11 colleges would result in a **26%**[2] **increase** in DO Programs in the U.S.

Notes: 1) Percent increase based on total number of accredited COMs as of November 2024 (42); 2) Based on average number of seats proposed across new planned Colleges of Osteopathic Medicine. Sources: Osteopathic Medical College Enrollment by Gender and Class Year 2000-2023 | AACOM; COMMISSION ON OSTEOPATHIC COLLEGE ACCREDITATION; At Morgan State University, a new medical college to open in 2024 | WYPR; Proposed College of Osteopathic Medicine Project Advances in FY25 Federal Funding Process - IUP Now – IUP.

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EKU COM Differentiating Factors

While the market for osteopathic medical students is increasingly competitive due to new program entrants, the following differentiating factors may help EKU compete for students over competitor programs.

- As the only public osteopathic medicine program in the state, EKU would offer in-state tuition rates, making DO school more accessible to Kentucky residents.

- EKU's central location in a rural area positions it to attract rural students and send them back to their communities, addressing the rural physician shortage.
- With 91% of undergraduate students from Kentucky and 75% of graduates finding employment in the state within three years, EKU demonstrates a commitment to serving and retaining local talent which may appeal to prospective students.

- EKU has a robust portfolio of programs in health-related fields, including pre-med, biomedical sciences, psychology, nutrition, and EMT/paramedic. These programs could serve as a pipeline to the COM.

Sources: IPEDS EKU Profile; EKU Financial Affairs Annual Report.

Workforce Alignment

Overall Feasibility Assessment

Workforce Alignment	G	By producing more physicians, many of whom would be expected to go into primary care, the EKU COM could address the current shortage of primary care physicians in eastern KY and the Commonwealth more broadly.

EKU | COLLEGE OF OSTEOPATHIC MEDICINE

National & Regional Demand for Physicians

Demographics such as population growth and aging continue to be critical drivers of increased physician demand across the nation and in Kentucky.

The US is facing a shortage of physicians[1]

The Association of American Medical Colleges (AAMC) predicts that the US will face a **shortage** of **13,500 to 86,000 physicians** by 2036, with a shortfall of **20,200 to 40,400 primary-care physicians**, due to the growth and aging of the population and the impending retirements of older physicians.

Key Statistics:

- The **U.S. population** is projected to grow by $28M people, to $360M, an **8.4% increase** from 2021 to 2036.
- The nation's **65-and-older population** is projected to **grow by 34%** in the same time period.
- Physicians **aged 55+ made up 42% of the active workforce** in 2021. Therefore, it is very likely that more than a third of currently active physicians will retire within the next decade.

Kentucky is also facing a shortage of physicians, particularly in rural areas

By **2031**, The Kentucky Center for Statistics projects a shortage of **644 physicians** and **751 primary-care physicians.**

Key Statistics:

- The 2022 Kentucky Physician Report indicates that of the 10,002 physicians practicing in Kentucky, **75% are in urban counties**, with almost half working in Fayette and Jefferson counties.
- **Kentucky ranks 40th** among the states in primary-care physicians per 100,000 people, with only 2,696 practicing statewide.
- Almost a third of Kentucky physicians have been licensed for 31 to 50+ years (32.3%).

HPSA[2] Counties in Kentucky

County Type	Number of Counties	Counties with Physician HPSA (%)	Counties with PCP HPSA (%)
Rural	86	15 (17%)	32 (37%)
Urban	34	10 (29%)	12 (35%)
Total	120	25 (21%)	44 (37%)

Notes: 1) Physicians include all those that graduated from DO and MD programs; 2) Health Profession Shortage Area (HPSA) designations indicate areas where there are 3,500 or more patients for every one provider; Sources: AAMC Supply and Demand Projections, KY Center for Statistics Occupational Outlook Dashboard, UK Kentucky Physician Report 2022.

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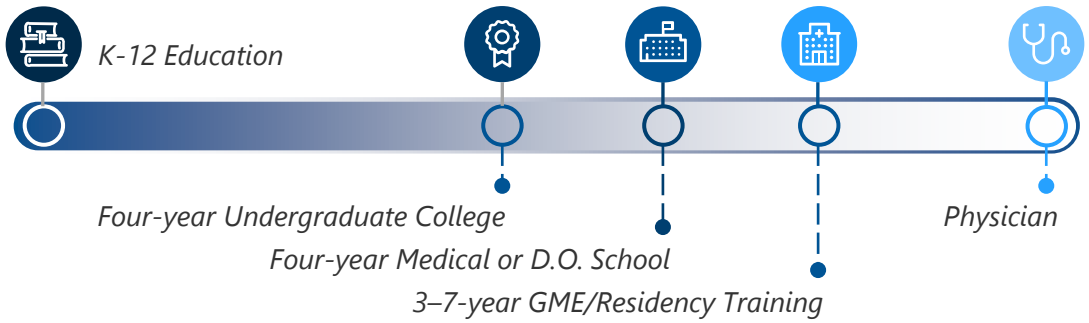
Osteopathic vs. Allopathic Medical Education

While osteopathic and allopathic education provide a similar path to educating licensed physicians, career paths of MD vs. DO grads tend to differ. A majority of DOs practice in primary care compared to MDs, which may make a DO school particularly effective at addressing primary care shortages.

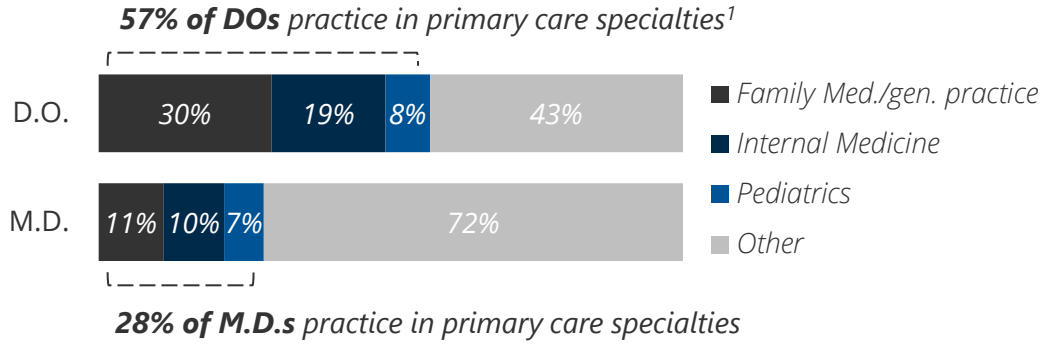
The typical path to become a physician is the same

The path to become a physician can span 11 – 15 years. A student must complete a four-year undergraduate degree, attend two years of medical school in a classroom setting followed by 2 years of medical school conducting clinical clerkships outside of the classroom. Finally, the student must complete GME and a residency program for 3 – 7 years.



But there are important differences in the approach

Both allopathic and osteopathic medical schools teach students the scientific foundations needed to become licensed physicians, but they take different approaches. Allopathic medicine focuses on diagnosing and treating medical conditions, while **osteopathic medicine takes a more holistic, patient-centered approach**, focusing heavily on preventive health care and nutrition.



Osteopathic medicine's propensity to produce primary care physicians aligns closely with the **workforce needs of Kentucky**, particularly those in **rural communities**.

Notes: 1) Primary care includes family medicine/general practice, internal medicine and pediatrics specialties. Sources: AOA; AAMC

Faculty Recruitment

Overall Feasibility Assessment

Faculty Recruitment

Y

Peer COM benchmarks suggest that EKU will need to offer salaries that far exceed their current average faculty salary levels to compete for medical faculty.

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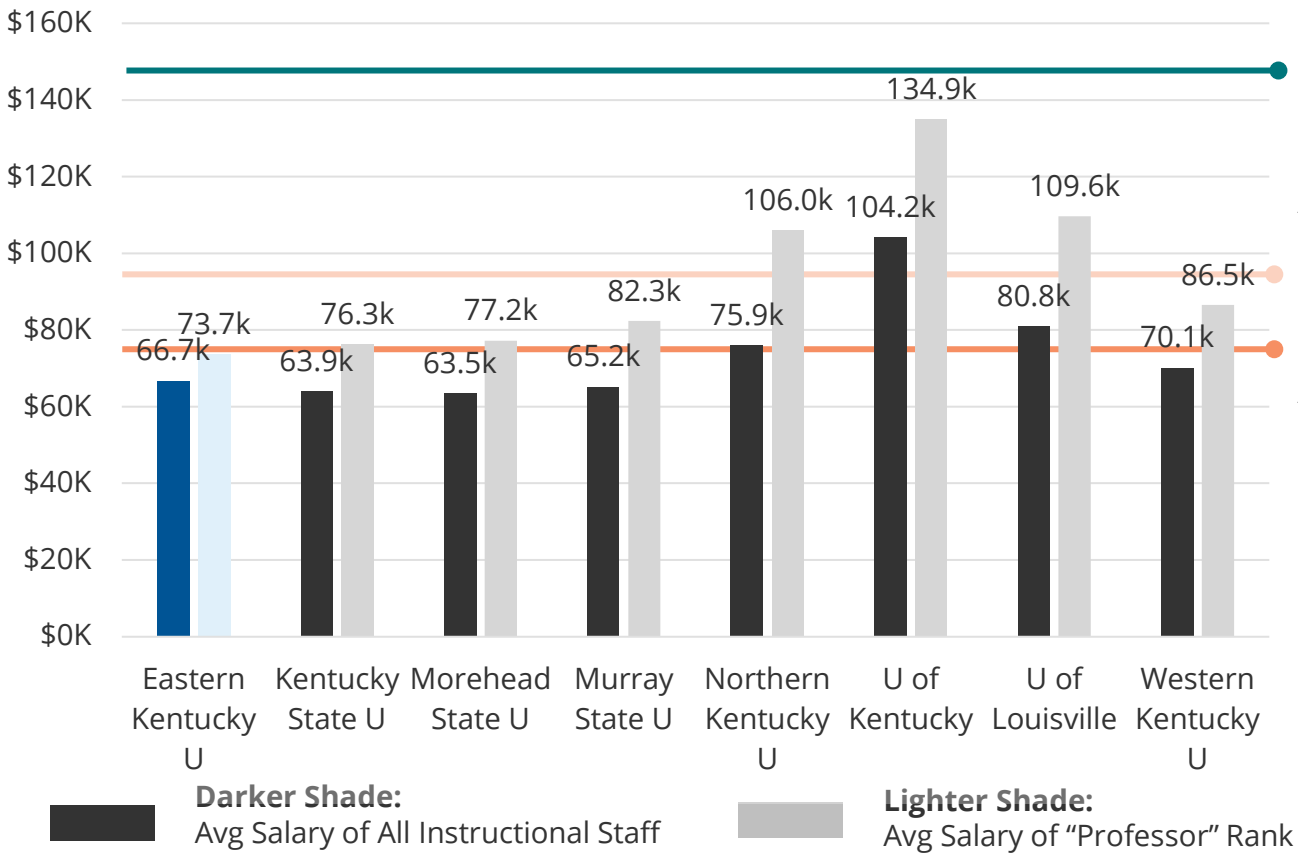
EKU Faculty Recruitment Considerations

EKU's average instructional salaries in AY2022-23 were lower than many other regional comprehensive universities in Kentucky and lower than their benchmark peer group. EKU can expect to need to pay DO faculty salaries that far exceed its current average.

Average Salaries of Full-Time Instructional Nonmedical Staff equated to 9-Months Worked, by Academic Rank: Academic Year 2022-23[1]



$146k
Peer benchmark for average faculty salary at similarly sized DO school

$96.1k
Average Professor Salaries at EKU's Benchmark Institutions

$75.6k
Average Instructional Staff Salaries at EKU's Benchmark Institutions

Key Takeaways

- **EKU's salaries for all Instructional Staff and Professors fall below the average for Kentucky comprehensives and for its peer group**, with average professor salaries lower than any other KY regional comprehensive and all 20 peer benchmark institutions.
- **EKU has not yet determined salary ranges for faculty in its proposed DO school** but should be prepared to offer salaries that are significantly higher than its current faculty averages. DO school benchmarks suggest that EKU may need to pay ~$146k in average faculty salaries, and more for administrators and deans.
- **EKU COM's founding dean may be the highest paid faculty or staff member at EKU**, with DO school benchmarks showing founding dean salaries approximating $500k.

Notes: 1) Reflects IPEDS "All instructional staff total of Average salaries of full-time instructional nonmedical staff equated to 9-months worked, by academic rank : Academic year 2022-23;" 2) See Appendix for full list of EKU Benchmark Peers.
Sources: IPEDS Data Center; EKU Benchmark Institutions.

Accreditation Standards

Accreditation Standards

Y

Per accreditation guidelines, EKU will need to hold approximately $48.75M in reserves until it graduates its first class, which EKU plans to ask the state legislature to fund. EKU will also need to grow research infrastructure and ensure quality across clinical education sites to maintain accreditation, requiring significant new investments.

EKU | COLLEGE OF OSTEOPATHIC MEDICINE

Accreditation Standards | Overview

The American Osteopathic Association's Commission on Osteopathic College Accreditation (COCA) sets forth twelve standards, including 78 individual elements, for the accreditation of new Colleges of Osteopathic Medicine (COMs), serving the interests of the public and of the students enrolled in COMs in the United States.[1]

1. Mission and Governance
2. Leadership & Administration
3. Finances
4. Facilities
5. Learning Environment
6. Curriculum
7. Faculty and Staff
8. Scholarly Activity
9. Students
10. Graduate Medical Education (GME)
11. Program and Student Assessment and Outcomes
12. Institutional Accreditation[2]

Notes: 1) In addition to COCA standards, EKU will also need to comply with all applicable SACSCOC accreditation processes, including those for Substantive Changes; 2) The Institutional Accreditation standard is not applicable, because EKU is already institutionally accredited, and does not require COCA to serve as their institutional accreditor. Source: COCA Accreditation Standards.

EKU | COLLEGE OF OSTEOPATHIC MEDICINE

Accreditation Standards | Key Challenges and Risks (1 of 3)

While all 12 COCA standards are robust and require significant administration overhead, the following 9 represent the most significant for EKU.

Standard	Requirement	Risk
2 **Leadership and Administration**	- Qualified leadership and administrative structures, including a dean and senior staff.	- Recruitment, selection and retention of a founding dean is crucial to the COM's success as this individual provides principal guidance in the development of the COM through all steps of the candidate status process and beyond through pre-accreditation status and into accreditation. A change in the dean during this time period requires re-initiation of the candidate status application process per COCA guidelines.

3 **Finances**	- Sufficient financial resources, including:
	  - Escrowed reserve fund equal to the greater value of $30M **or** tuition multiplied by the approved number of students multiplied by four years. This reserve must be maintained until graduation of the first class (~8 years).
	  - Operating reserve fund of one-quarter of the minimum escrowed reserve fund.
		- EKU's financial health assessment surfaced some risks from elevated debt levels that creates some risk around their ability to access funding and manage a significant new financial investment.
		- EKU will need to secure significant reserves funds (~$48.75M) to meet accreditation requirements. They presently plan to seek this funding for from the legislature. A new DO school will also require significant upfront and recurring operating funds. Estimated operating expenses at steady state are in the range of $15M - $21M per year.

4 **Facilities**	- Adequate physical facilities, equipment, and resources for clinical, instructional, research, and technological functions at all COM locations, including clinical partner sites.	- EKU is currently planning a ~$75M facility for EKU COM, and the materiality of this investment to EKU's overall finances elevates the risk profile, particularly given EKU's existing debt levels (note that EKU currently plans to ask the legislature for funding.) Assessing all clinical partner facilities also poses additional complexities and expenses.
5 **Learning Environment**	- Responsibility for the educational program at all teaching locations, including third-party clinical partner sites, ensuring appropriate student supervision during patient care.	- EKU COM will depend on clinical partners to uphold standards, requiring ongoing engagement from EKU faculty and staff to minimize the risk of inconsistencies across partner sites. Peer institutions employ staff (~15 FTEs) to run their clinical education program.

Sources: COCA Accreditation Standards; Peer benchmarking data and analysis from like-sized osteopathic medical schools.

Accreditation Standards | Key Challenges and Risks (2 of 3)

While all 12 COCA standards are robust and require significant administration overhead, the following 9 represent the most significant for EKU.

Standard	Requirement	Risk
6 Curriculum	- Faculty must design and implement a curriculum that enables students to achieve Osteopathic core competencies and ensures comparable clinical education experiences across all sites.	- Securing Clinical Affiliation agreements for clerkships/rotation slots are increasingly competitive and in high demand among competitor institutions. While interviewed health partners expressed preliminary interest in providing clinical rotations for EKU COM students, the limited supply of available slots presents a risk as the feasibility of the COM relies on student placement in clinical settings, particularly since EKU has not yet secured any clinical partners.
7 Faculty and Staff	- Sufficient faculty resources and qualifications at all teaching sites. - Qualified faculty and staff through education, training, experience, and ongoing professional development. - Comprehensive, fair, and uniform system of student assessment.	- Hiring high-quality faculty and staff is critical for the success of the COM, impacting student recruitment and retention, research, and curriculum development. Based on peer benchmarks, EKU will require around 19 faculty and 62 new staff and administrators. In total for faculty and staff, EKU can expect to pay $8 – 12 M in salaries. This will very likely require the institution to attract new talent to the Richmond area.
8 Scholarly Activity	- Commitment to research and scholarly activity through budgetary support, faculty research, research infrastructure, and student inclusion in research throughout all four years of the program.	- EKU currently does not engage in significant research activity, so the institution will need to invest in research infrastructure and demonstrate an ongoing commitment to research in its budget and curriculum to meet the COCA requirement. Peer institutions staff ~6 FTEs to oversee and support research in DO school.

Sources: COCA Accreditation Standards; Peer benchmarking data and analysis from like-sized osteopathic medical schools.

Accreditation Standards | Key Challenges and Risks (3 of 3)

While all 12 COCA standards are robust and require significant administration overhead, the following 9 represent the most significant for EKU.

Standard	Requirement	Risk
9 Students	- Comprehensive student counseling services (academic, career, debt management, mental health, physical health).	- Recruiting and maintaining robust staff and budget dedicated to student success is imperative for positive outcomes. (Peer institutions staff ~6 FTEs to oversee student affairs in DO school.) This may require the institution to attract new talent to the Richmond area.
10 Graduate Medical Education (GME)	- Dedicated GME office. - Curriculum that prepares students for entry into GME programs and subsequent medical practice.	- Residency slots from GME are increasingly competitive and in high demand among competitor institutions. The limited supply of available slots presents a risk as the feasibility of the COM relies on graduate placement in clinical settings.

Sources: COCA Accreditation Standards; Peer benchmarking data and analysis from like-sized osteopathic medical schools.

Clinical Placements

Clinical Placements

Y

Several regional healthcare leaders, including Baptist Health Richmond, ARH, and CHI St. Joseph, have expressed interest in providing clinical education to EKU COM students, documented in letters of support, though evidence of an anchor partner or sufficient clinical capacity could not be validated.

EKU | COLLEGE OF OSTEOPATHIC MEDICINE

DO Distributive Model of Clinical Education Operating Requirements

EKU's proposed model of clinical education will require an extensive partner network as well as investments in faculty and staff, technology, and payments to clinical partners.

In an **osteopathic medical program**, students gain hands-on clinical experience at various off-campus clinical sites rather than at an on-campus teaching hospital.

These clinical sites include hospitals, clinics, private practices, outpatient facilities, and long-term care facilities.

Factors Driving Cost and Complexity in Distributive Models

Breadth of Clinical Partner Network

Peer institutions partner with **20-80** hospitals, clinics, and other facilities across the US for clinical education. Since EKU plans to focus on rural education, they may establish partnerships with rural clinics which tend to have capacity to accommodate a smaller number of students, requiring them to enter into more partnerships overall.

FTEs Required to Run Program

Benchmarked DO programs employ **~fifteen FTE** to administer their clinical education program, including a Director of Clinical Education and multiple clerkship coordinators. These individuals help students manage their rotation schedules and ensure quality teaching experiences.

Other Costs to Administer Placements

EKU anticipates needing to pay **$9.6k** per year per student to clinical partners to educate students, which is materially aligned with peer expense estimates. New technology systems may also be needed to administer clinical schedules.

⚠ While the cost of administering a distributive model of clinical education is lower than a traditional model with a teaching hospital, **the complexity and risk are higher**. EKU will need to develop a network of partners and invest in faculty and staff to administer the program and ensure that students consistently receive high-quality training.

Sources: Peer benchmarking data and analysis from like-sized osteopathic medical schools.

EKU | COLLEGE OF OSTEOPATHIC MEDICINE

Regional Clinical Capacity

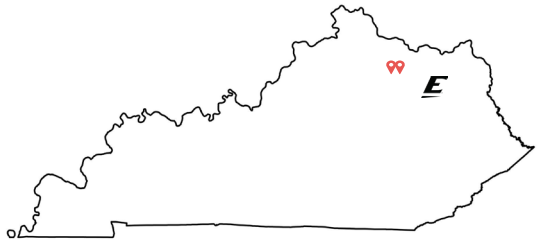
Based on stakeholder interviews, the proposed new osteopathic medical school is well-positioned to establish and arrange formal relationships with community partners, though clinical placement opportunities may limited by physician capacity to train students, particularly amid existing clinical relationships with other regional medical schools (MD and DO).

Clinical Landscape in Kentucky

As of 2023, Kentucky is home to 29 Critical Access Hospitals, 404 Rural Health Clinics, 374 Federally Qualified Health Centers outside of urbanized areas, and 44 short-term hospitals located of urbanized areas.

Clinical Landscape in Richmond Area

There are seventeen Teaching Hospitals in Kentucky and two of these hospitals are within a 50-mile radius of Richmond. There are several hospitals in the area which are not teaching hospitals, but they may have potential for future partnerships. Clinical landscape is limited by physician capacity to provide clinical education, and many local partners already provide clinical education to students from the University of Kentucky, the University of Louisville, the University of Pikeville, and Lincoln Memorial University.



Community Partners Expressing Preliminary Interest in Providing Clinical Education[1]

CHI Saint Joseph Health

BAPTIST HEALTH® Richmond

ARH Appalachian Regional Healthcare

WHITE HOUSE CLINICS WWW.WHITEHOUSECLINICS.COM

Industry Associations Expressing Preliminary Interest on Behalf of Their Members[1]

KPCA KENTUCKY PRIMARY CARE ASSOCIATION

KAHCF KCAL

Note: 1) Regional health partners and association spokespersons expressed preliminary interest during project team interviews. These organizations have no obligation to enter into partnerships in the future. This list is representative and not exhaustive.
Source: Open Payments List of Teaching Hospitals 2023

EKU | COLLEGE OF OSTEOPATHIC MEDICINE

Clinical Capacity and Scale

While no formal clinical partnerships can be entered into at this time, evidence that there is sufficient clinical scale is critical to the feasibility assessment. At scale, EKU COM will ultimately need to facilitate clinical education for approximately 300 students, fulfilling four rotations per year per student.

EKU and the project team gathered and analyzed the following sources to assess capacity for clinical placements:

Potential Clinical Education Partner	Source	Outcome / Clinical Capacity
Mountain People's Health Councils, Inc	Letter of Support provided by EKU	"…prepared to accommodate up to 5-10 students annually"
KAHCF/KCAL	Letter of Support provided by EKU	General letter of support, particularly underscoring workforce alignment
KPCA	Letter of Support provided by EKU	General letter of support, particularly underscoring workforce alignment
HCA Healthcare Nashville	Letter of Support provided by EKU	Specifically references their desire to matriculate "graduates (not hosting clinical rotations) from your proposed medical school on their trajectory toward licensure and board qualifications "
KAHCF/KCAL	Project team interview	Represented general support on behalf of membership
White House Clinics	Project team interview	Currently not hosting students for MD/DO clinical rotations, but would welcome the opportunity to work with EKU
CHI St. Joseph Health	Project team interview	Voiced desire to forge stronger partnership; Current total DO clinical placements of approximately 13 students annually
KPCA	Project team interview	Voiced interest in growing the EKU relationship and excitement about the prospect of a DO school focused on rural health; shared inherent challenges with preceptor capacity and preceptor support
Baptist Health Richmond	Project team interview	Currently hosting placements for 10-20 MD and DO annually and would roughly hope to double this if they expand .
Appalachian Regional Healthcare (ARH)	Project team interview	Voiced excitement over the prospect of a regional medical school and would prioritize regional (EKU) students

While numerous partners expressed support for EKU COM, the project team did not receive evidence of an anchor partner or sufficient clinical placement capacity to remove feasibility concerns at the time of this report.

Note: 1) Health partners and association spokespersons expressed preliminary interest during project team interviews. These organizations have no obligation to enter into partnerships in the future.

Murray State | Doctoral Program for Professional Practice and Licensure in Veterinary Medicine

Financial Health Assessment

Overall Feasibility Assessment

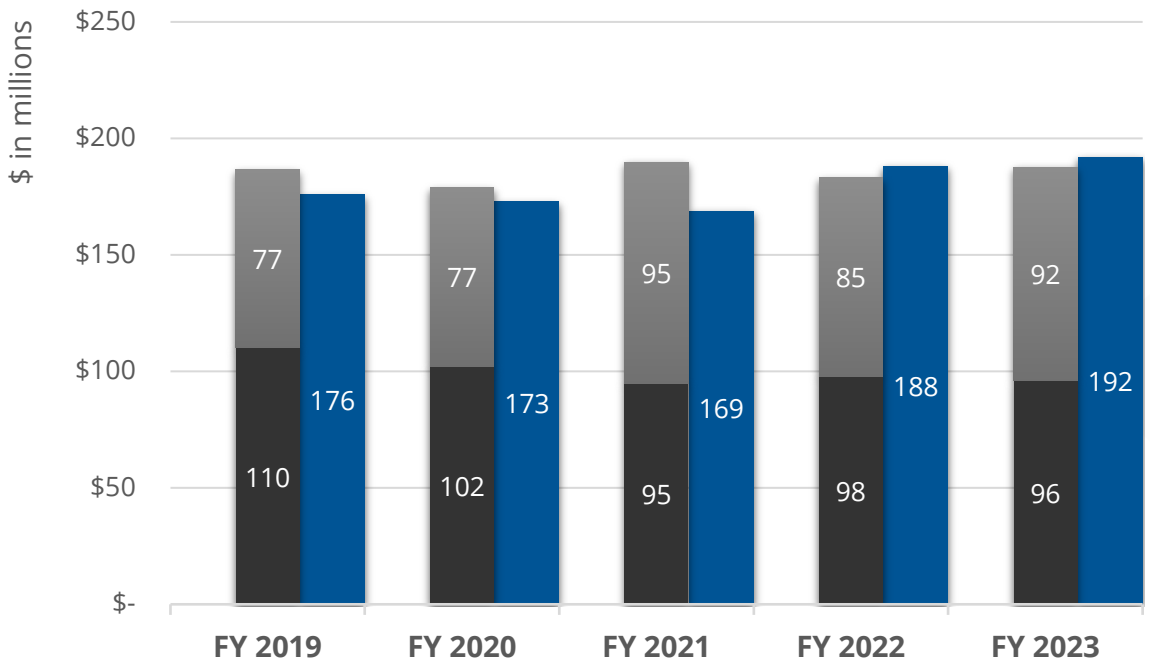
Financial Health 	G	Murray State's financial health assessment points to strong financial management practices and a healthy balance sheet. Financial pressures observed (e.g., slowed tuition revenue growth) are common across public higher education.

MURRAY STATE | COLLEGE OF VETERINARY MEDICINE

Financial Health Assessment | Net Position

From Fiscal Year (FY)19 to FY21, Murray State recorded positive changes in net position (from audited financial statements, adjusted to exclude Pension/Other Postemployment Benefits (OPEB) Expense Adjustments) from $10.7M in FY19 to $20.8M in FY21. In recent years, slowed revenue growth and rising expenses have posed some financial challenges.

Murray State Actual Ending Results (FY 2019 – FY 2023)



Key Takeaways

Murray State has managed to mostly keep **total revenues balanced with total expenses**. However, expense growth (9.1%) over the past 5 years is significantly outpacing stagnant revenue growth (<1%).

The main driver of revenues for Murray State, **Net Tuition and Fees, has declined in recent years from $60.5M in FY 2019 to $51.1M in FY 2023.** Total undergraduate enrollment growth during this time remained stagnant (<1%). Moody's notes that "net tuition revenue has been constrained by state tuition caps as well as weak regional demographics."

The main drivers of expenses for Murray State, Instruction and Operation/Maintenance of Plant**, have grown in recent years from $61.1M and $20.0M in FY 2019 to $62.6M and $22.8M in FY 2023 respectively.**

Murray State has been able to keep total revenues balanced with total expenses through **increased State Appropriations and Federal/State Grants and Contracts.** Appropriations from the Commonwealth of Kentucky increased 14% over the last five years.

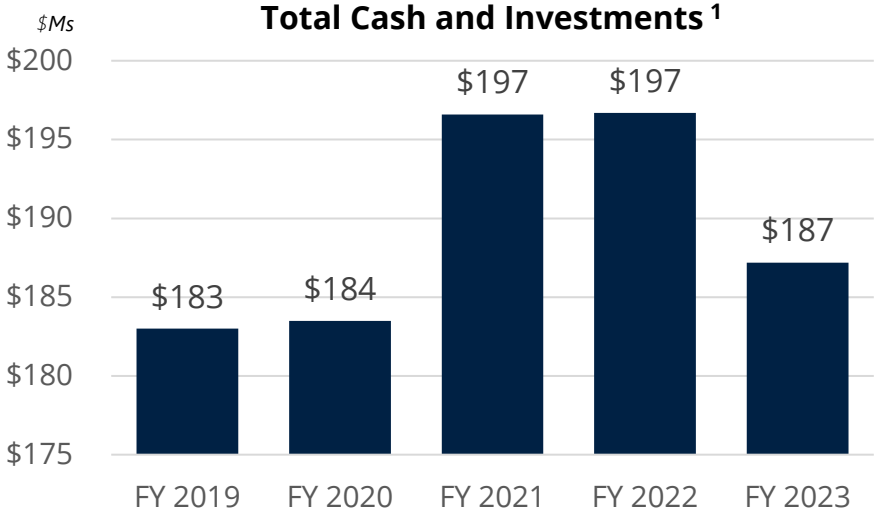
Murray State has generally balanced growth in net position; however, the institution, along with many other public institutions in Kentucky, is facing growing financial pressure from slowed net tuition revenue growth and high fixed costs, which may limit its ability to better align revenues with expenses.

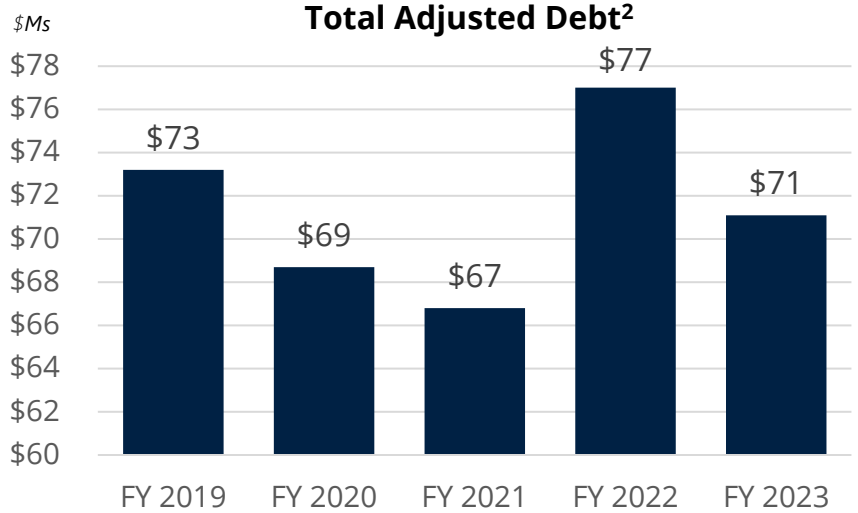
Notes: 1) Adjusted to not include State Pension Expense (Benefit) GASB and State OPEB Expense (Benefit) GASB 75; 2) Include Net Nonoperating Revenues, State Capital Appropriations, Other Insurance Proceeds, Capital Gifts, Additions to Permanent Endowments Sources: Murray State Audited Financial Statements, Moody's Rating Report (May 2024).

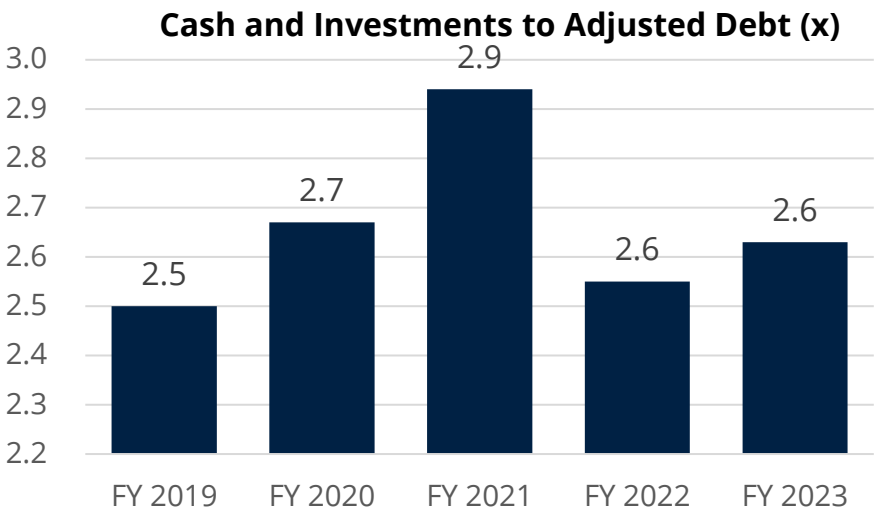
MURRAY STATE | COLLEGE OF VETERINARY MEDICINE

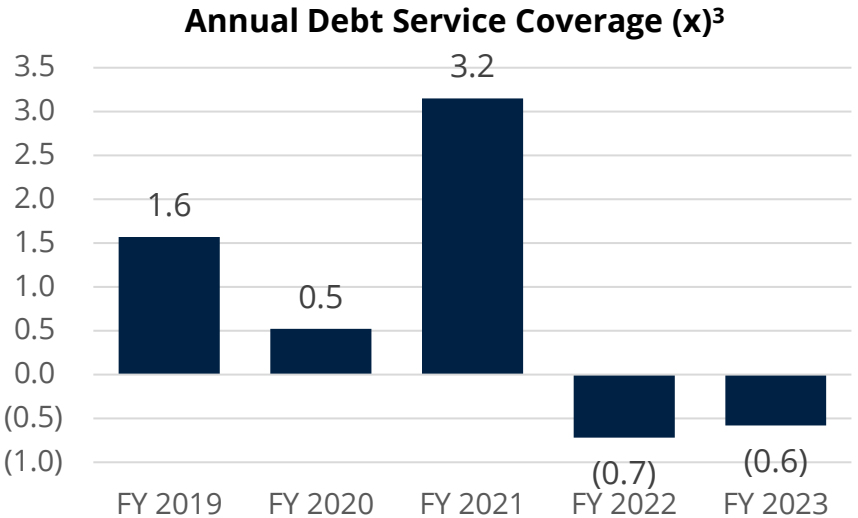
Financial Health Assessment | Balance Sheet Summary

Despite pressures on operational performance, Murray State's balance sheet demonstrates relatively steady wealth and liquidity, with Cash and Investments (C&I) covering total debt 2.6x.









Key Takeaways

Steady Cash and Investments
Moody's notes that Murray State's management has a good track record of expense management, which has supported the university's good financial policy and is reflected in their total C&I in recent years.

Steady Total Adjusted Debt
Total Adjusted Debt decreased 3% from FY 2019 to FY 2023, remaining relatively steady in recent years.

Manageable Leverage Position
Despite recent financial challenges from operations, a manageable debt load with C&I at 2.6x debt has put the institution in a strong and flexible position for funding future strategic initiatives and objectives.

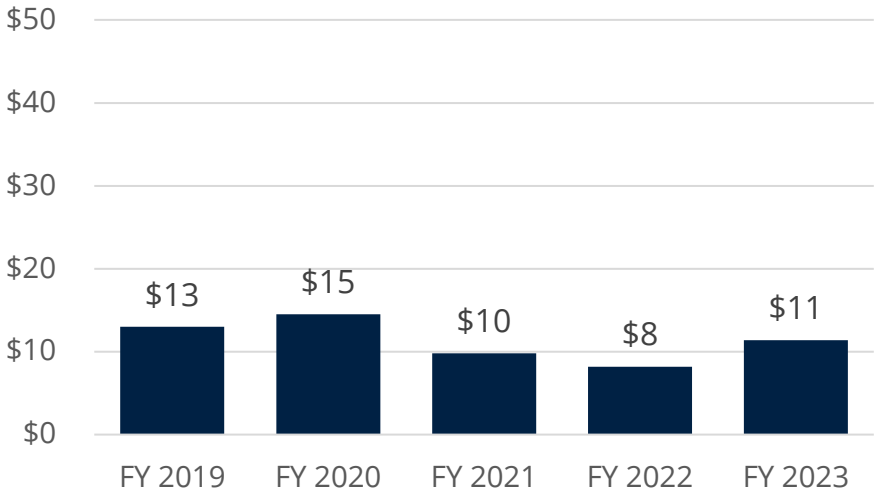
Notes: 1) Reflects Cash and Cash Equivalents, Restricted Cash and Cash Equivalents, Restricted Investments; 2) Reflects Leases Payable (Current Portion), Long-Term Debt (Current Portion), Leases Payable, Long-Term Debt; 3) Reflects Principal Paid on Capital Debt, Interest Paid on Capital Debt, Interest Paid on Leased Assets. Sources: Murray State Audited Financial Statements, Moody's Rating Report (May 2024).

MURRAY STATE | COLLEGE OF VETERINARY MEDICINE

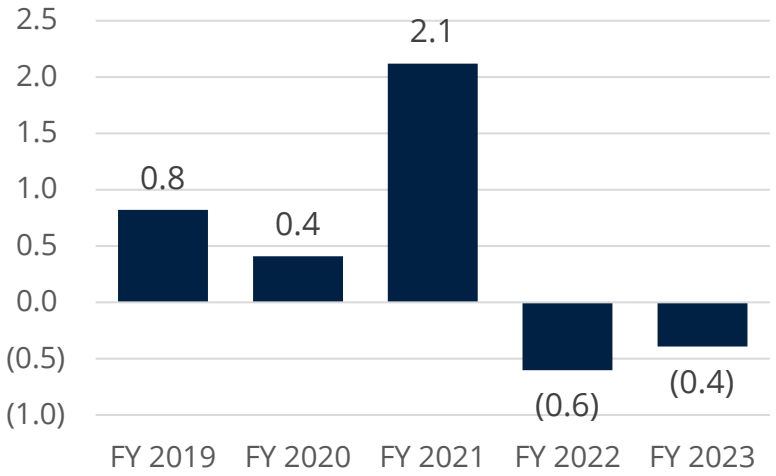
Financial Health Assessment | Capital Expenditures

Murray State's annual capital spend is mostly in line with depreciation expense. Expenditures are supported by operating performance and state aid.

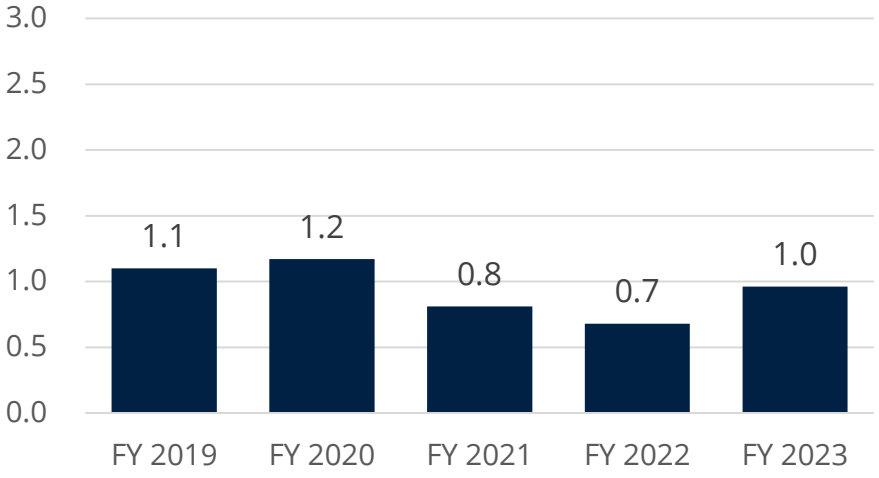
Capital Expenditures [1]



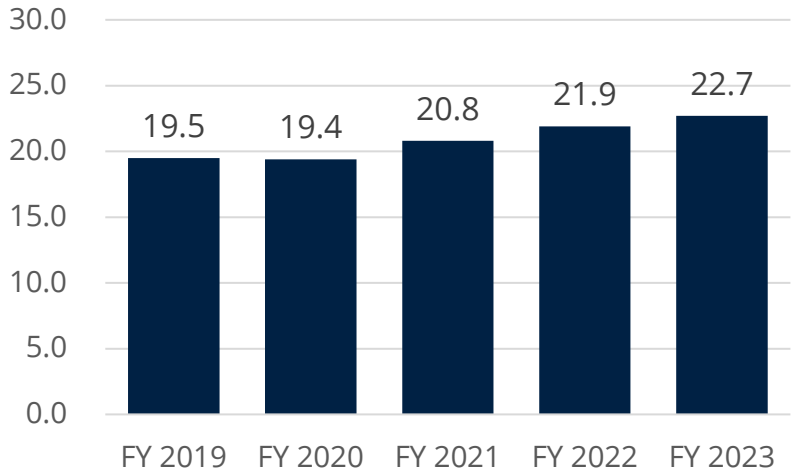
Change in Adjusted Net Position [2] to CapEx (x)



Capital Spending Ratio (x)



Average Age of Plant (Years)



Key Takeaways

Supported Capital Spending
Capital spend peaked in FY 2020 with spend of nearly $15M and has mostly kept pace with depreciation and the aging of facilities.

Strategic Growth
The uptick in capital investments in the last few years has been bolstered by improved government support for operations and capital, as noted by Moody's.

Further Growth of Capital Planning
Moody's highlights that Murray State's high average age of plant represents a challenge to its credit and financial position. Continuing to plan around current capital needs can enable the institution to more strategically allocate and manage resources going forward.

Note: 1) Reflects Purchase of Capital Assets; 2) Adjusted to not include Pension/OPEB Expense Adjustments. Sources: Murray State Audited Financial Statements; Moody's Rating Report (May 2024).

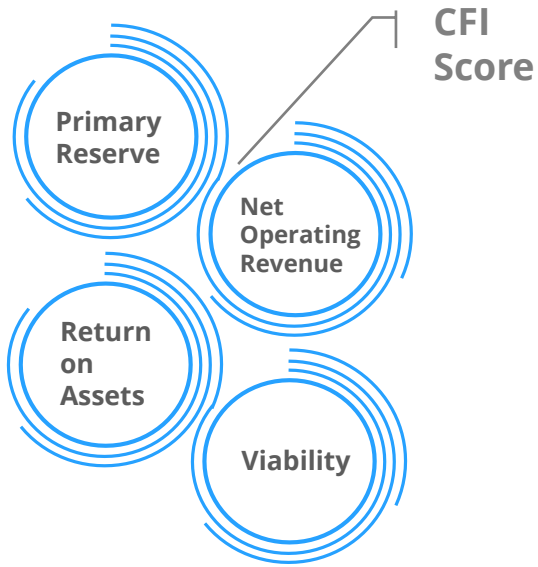
MURRAY STATE | COLLEGE OF VETERINARY MEDICINE

Financial Health Assessment | Composite Financial Index (CFI)

Murray State's Composite Financial Index (CFI) score of 5.91 in 2023 provides a point-in-time indicator of strong financial health that supports focusing resources to compete in future states.

The four ratios are **primary reserve, net operating revenue , return on assets, and viability**. These ratios **gauge the fundamental elements of the financial health** of an institution. The composite score reflects the overall relative financial health along a scale from **negative 4.0 to positive 10.0** for higher education institutions. A score greater than 3 is considered relatively financially healthy.

CFI Components



Key Ratios

Primary Reserve Ratio

$$\frac{\text{expendable net assets}}{\text{total expenses}}$$

Net Operating Revenue Ratio

$$\frac{\text{net operating income}}{\text{total unrestricted operating revenues}}$$

Return on Assets Ratio

$$\frac{\text{change in net assets}}{\text{total net assets}}$$

Viability Ratio

$$\frac{\text{expendable net assets}}{\text{long-term debt}}$$

Murray State CFI Score[1,2]	Ratio	CFI Score
Primary Reserve	0.72x	1.90
Net Operating Revenue	-1%	-0.11
Return on Assets	9%	0.86
Viability	3.89x	3.27
Total	---	5.91

Notes: 1) Adjusted to not include Pension Expense Adjustments and OPEB expense adjustments; 2) Ratio calculations include Component Unit (CU) data. Sources: Murray State Audited Financial Statements; Higher Learning Commission CFI Worksheet ; TIAA The Financial Resilience of Independent Colleges and Universities (2017).

Student Success Assessment

Overall Feasibility Assessment

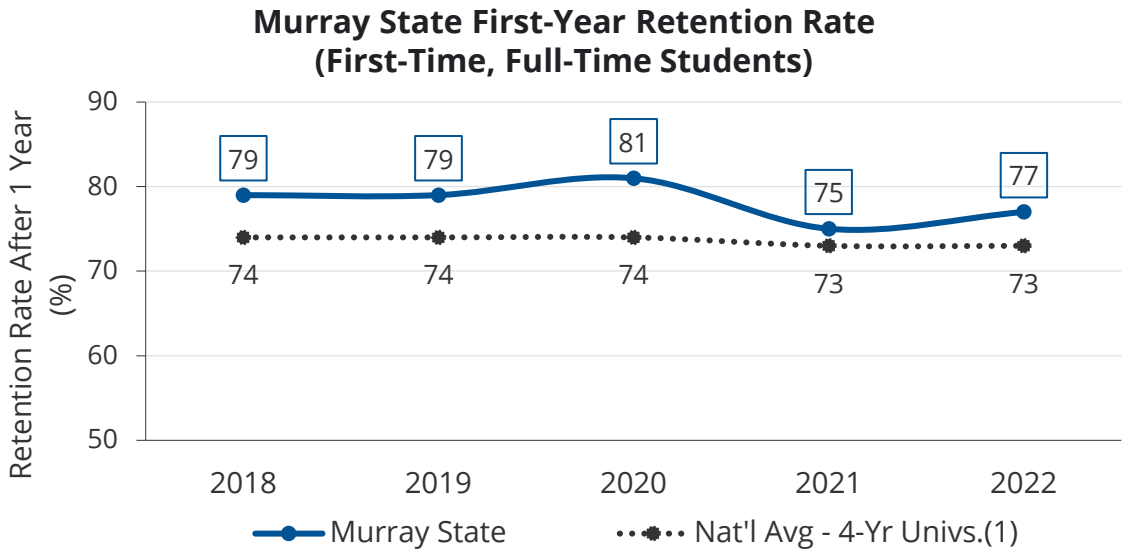
Student Success

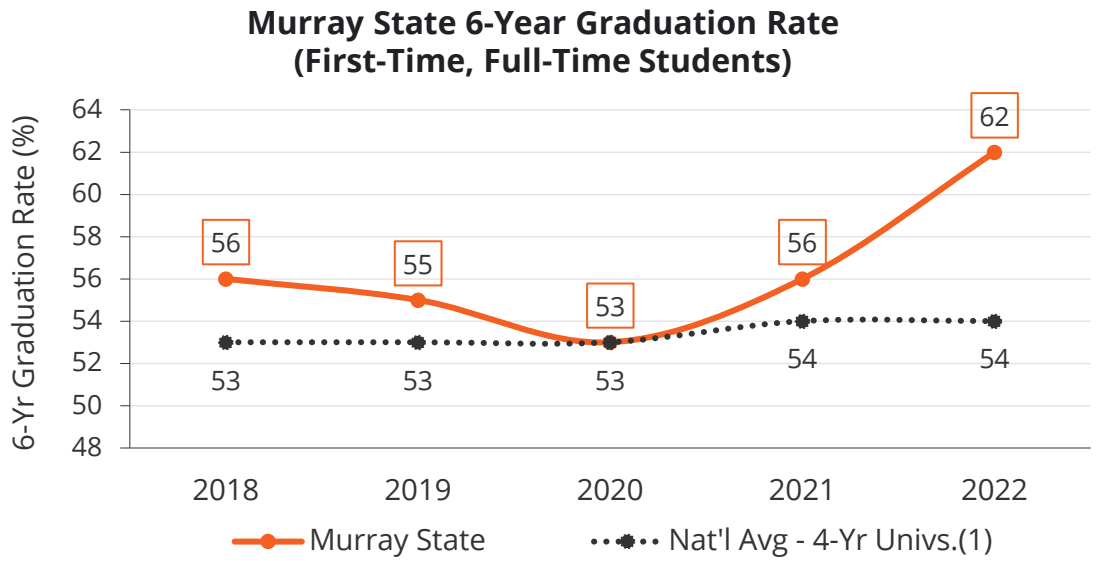
G

Murray State's undergraduate retention rates and six-year graduation rates have consistently outperformed their peer group average, and Murray State has performed better than or equivalent to other KY public comprehensive institutions on 8 of 9 metrics tracked by the KY performance funding model.

Current State Performance on Key Student Success Metrics

Murray State's undergraduate retention rates and six-year graduation rates have consistently outperformed their peer group average.





Retention rates recovering and above national averages…

- First-to-second year retention rates for first-time, full-time students has remained consistently above the national average over the last 5 years.
- First-year retention rates fell significantly from Fall 2020 to Fall 2021 by 6 percentage points. In Fall 2022, Murray State's first-year retention rebounded slightly, representing a partial recovery to pre-pandemic highs.

…while graduation rates at a 5-year high

- Across the five-year period from 2018 to 2022, Murray State had the largest net increase in six-year graduation rates among all Kentucky comprehensive universities at 6 percentage point.
- Murray State's graduation rates ranked the highest among Kentucky comprehensive universities in Fall 2022.

Notes: 1) National averages include all public and private not-for-profit four-year colleges and universities as reported in IPEDS. Source: IPEDS Data Dashboard.

MURRAY STATE | COLLEGE OF VETERINARY MEDICINE

Current State Performance on the Comprehensive Funding Model

Murray State outperformed or performed equivalent to the KY comprehensive average on eight of the KPIs incentivized by the model.

CPE utilizes a performance-based funding model that aligns funding with institutional performance on desired state policy goals. After each institution receives their "funding floor", the remaining resources are distributed based on the funding formula:

35% *based on student success metrics* **35%** *based on course completions* **30%** *based on operational support.*[1]

From 2013-14 to 2022-23, Murray State performed better than or equivalent to other KY public comprehensive institutions on **eight out of nine KPIs:**

- Total Bachelor's Produced
- STEM+H[2] Bachelor's Produced
- Low Income Bachelor's Produced
- URM[3] Bachelor's Produced
- Progression at 30 Hours
- Progression at 60 Hours
- Progression at 90 Hours
- Student Credit Hours Earned
- FTE[4] Student Enrollment

- Murray State performed 10 or more percentage points better than comprehensives overall on STEM+H Bachelor's, Low Income Bachelor's, Progression at 60, Progression at 90 Hours, and Total Bachelor's Produced.

Key

- Performed better than or equivalent to KY comps average
- Performed worse than KY comps average

Notes: 1) Funding proportions were amended to 40% for student success metrics and 30% for course completions for the 2024-25 funding distribution; 2) Science, Technology, Engineering, Math, and Health Sciences (STEM+H); 3) Underrepresented Minority (URM); 4) Full-Time Equivalent (FTE). Sources: 13 KAR 2:120E; Performance Funding - Ky. Council on Postsecondary Education; KRS 164.092; Workbook: Kentucky Postsecondary Education Interactive Data Dashboard; Funding Model Data provided by CPE.

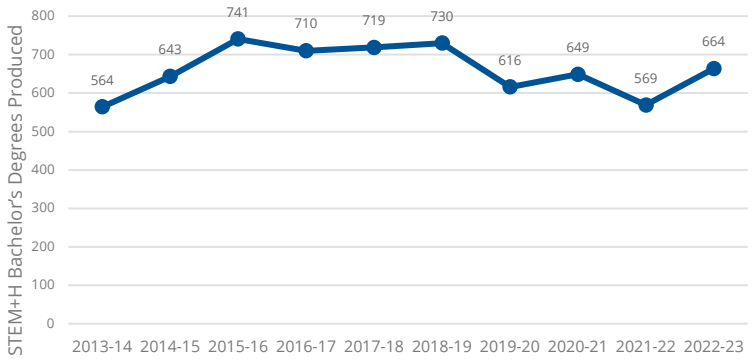
MURRAY STATE | COLLEGE OF VETERINARY MEDICINE

Current State Performance on the Comprehensive Funding Model

Murray State has recorded growth in STEM+H, URM, and Low-Income Bachelor's produced.

Data Trends

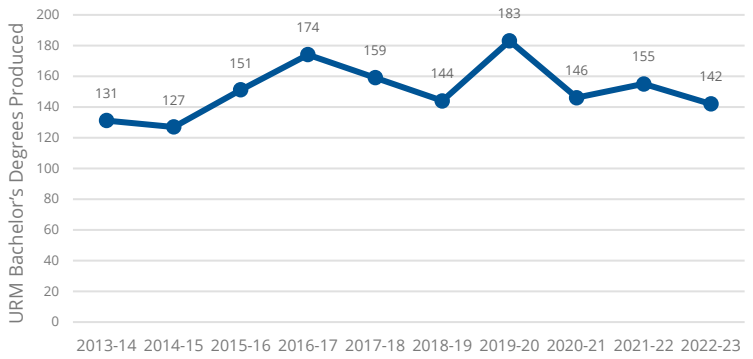
STEM+H Bachelor's Produced



18% Murray State | **7%** KY Comps[2]

number of STEM+H Bachelor's produced from 2013-14 to 2022-23

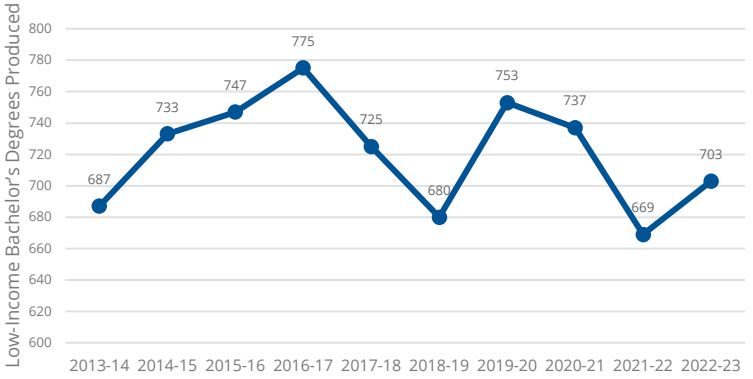
Underrepresented Minority Student (URM) Bachelor's Produced[1]



8% Murray State | **23%** KY Comps

number of URM Bachelor's produced from 2013-14 to 2022-23

Low-Income Bachelor's Produced



2% Murray State | **15%** KY Comps

number of Low-Income Bachelor's produced from 2013-14 to 2022-23

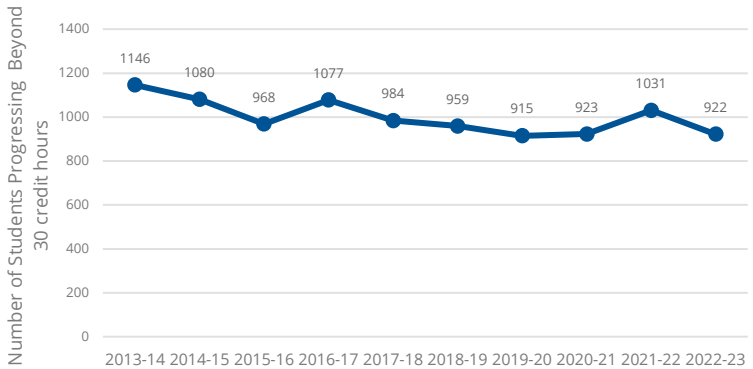
Notes: 1)The URM Bachelor's Degrees metric has been amended to "underrepresented students", defined as "first generation college students", for the 2024-25 funding distribution. 2) KY Comps refers to all six Kentucky public comprehensive universities: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University. Source: Funding Model Outcomes provided by CPE.

Current State Performance on the Comprehensive Funding Model

Murray State has experienced declines in all three progression metrics across the past decade, though those declines have been smaller or comparable than those recorded at other public comprehensives in Kentucky.

Data Trends

Progression @ 30

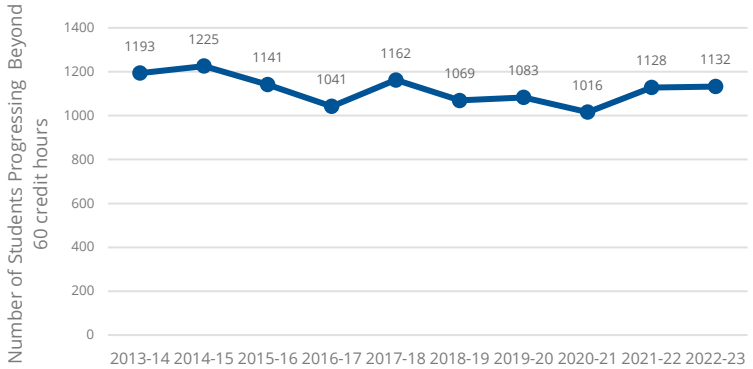


20% Murray State

20% KY Comps[1]

number of undergraduate students @ 30 hours from 2013-14 to 2022-23

Progression @ 60

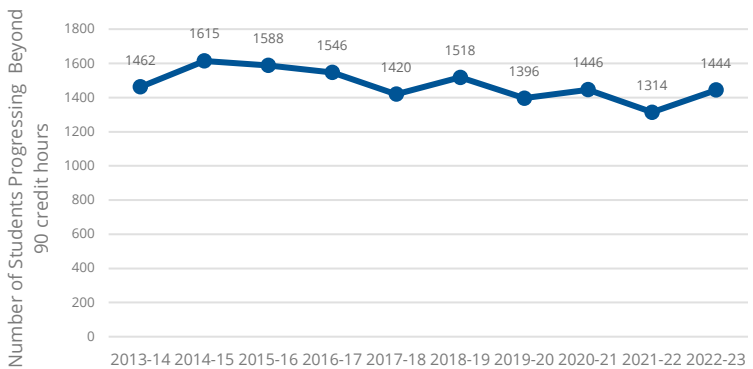


5% Murray State

15% KY Comps

number of undergraduate students @ 60 hours from 2013-14 to 2022-23

Progression @ 90



1% Murray State

11% KY Comps

number of undergraduate students @ 90 hours from 2013-14 to 2022-23

Notes: 1) KY Comps refers to all six Kentucky public comprehensive universities: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University. Source: Funding Model Outcomes provided by CPE.

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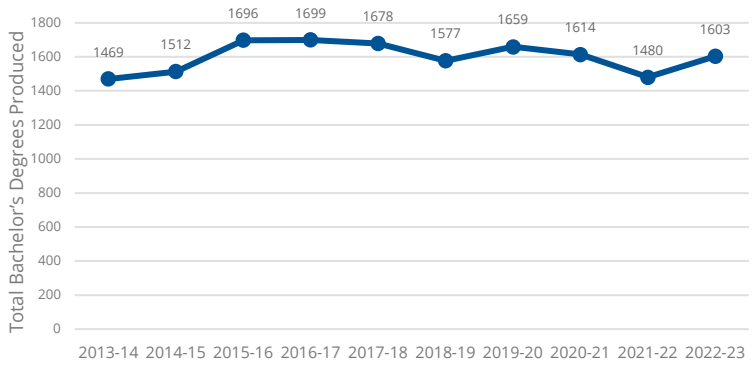
Current State Performance on the Comprehensive Funding Model

While Murray State has recorded growth in total bachelor's produced, their enrollment and credit hours have decreased similarly to KY comprehensives overall.

Data Trends

Total Bachelor's Produced

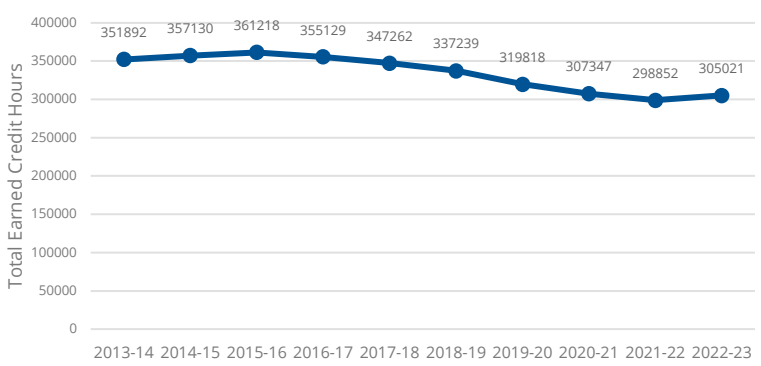


9% Murray State

8% KY Comps[1]

number of Total Bachelor's produced from 2013-14 to 2022-23

Student Credit Hours Earned

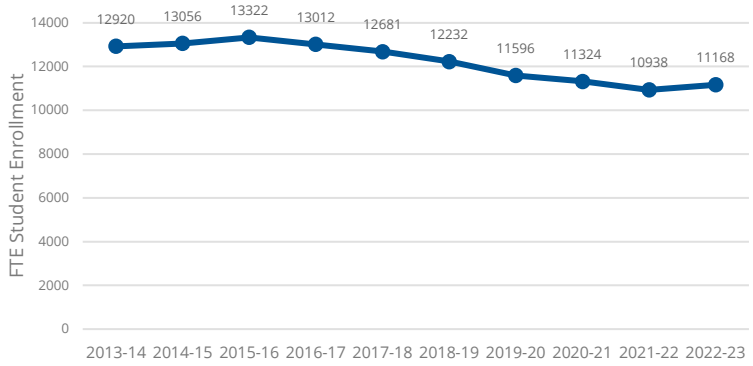


14% Murray State

16% KY Comps

number of Student Credit Hours earned from 2013-14 to 2022-23

FTE Student Enrollment



14% Murray State

21% KY Comps

number of FTE Student Enrollment from 2013-14 to 2022-23

Notes: 1) KY Comps refers to all six Kentucky public comprehensive universities: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University. Source: Funding Model Outcomes provided by CPE.

Research Infrastructure Assessment

Overall Feasibility Assessment

Research Infrastructure	G	Murray State's research expenditures are comparable to the other KY regional comprehensives and have grown by ~30% across the last 5 years. Murray State also possesses veterinary research equipment in their Breathitt Veterinary Center and other facilities.

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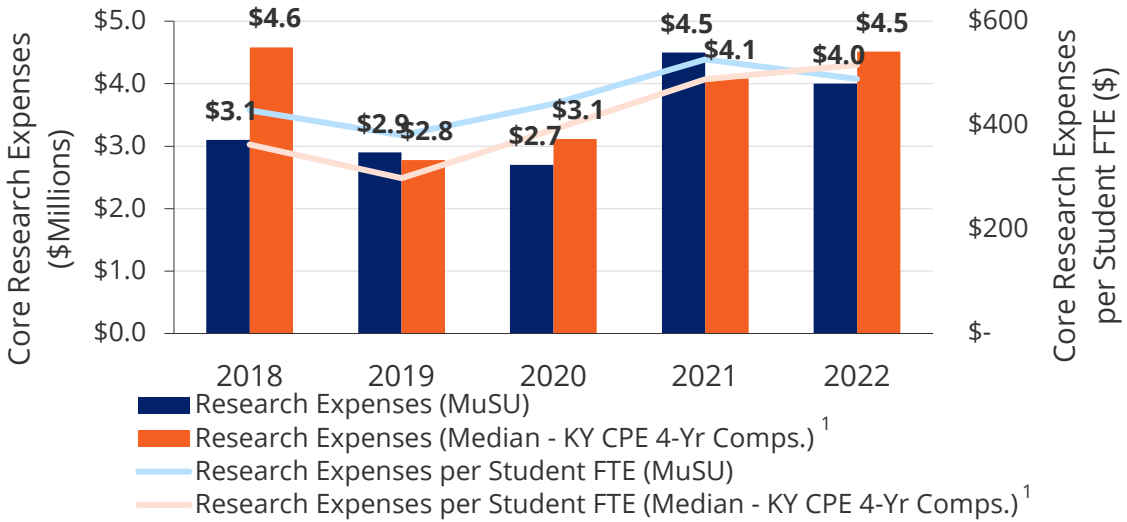
Current State Research Infrastructure

Murray State has increased its research expenditures across the last five years and has foundational infrastructure to support research growth.

Murray State Core Research Expenses (2018-2022)



Murray State's total core research expenses grew by over 45% from 2018 to 2021. Although core research spending decreased from 2021 to 2022, total core research expenses still grew by close to 30% over a five-year period.

Murray State's research investment has been comparable to those of its Kentucky comprehensive peers. Murray State's total core research expenses was equal to or above the peer median for four out of the last five years.

Research Infrastructure Highlights

Office of Research and Creative Activity (ORCA)

Murray State's Office of Research and Creative Activity supports faculty-mentored scholarly and research opportunities for undergraduate/graduate students. ORCA offers grants and organizes campus/community events to support student and faculty research in all disciplines.

Breathitt Veterinary Center (BVC)

The BVC is a diagnostic laboratory and research facility that is part of Murray State, located in Hopkinsville, Kentucky. The center provides a wide range of veterinary services to support animal and public health.

Veterinary Technology/Pre-Veterinary Facilities

The Veterinary Technology/Pre-Veterinary Medicine Program is located on the main farm complex in the A. Carman Animal Health Technology Center. The center houses classrooms, faculty offices, laboratories, a pharmacy, surgery suite, kennels and a radiology laboratory. The program is equipped with state-of-the-art supplies and equipment.

Notes: 1) KY Comps refers to all six Kentucky public comprehensive universities: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University. Sources: IPEDS Data Center, Murray State's Office of Research and Creative Activity; AVMA Accreditation Policies and Procedures

Cost-Benefit Analysis

Overall Feasibility Assessment

Cost-Benefit Analysis	Y	Murray State's CVM is projected to break-even under moderate planning assumptions in FY30 without ongoing state support and anticipated to generate significant economic impact in Calloway County and KY. Murray State's existing faculty and infrastructure in animal sciences offset some startup costs.

Assumptions Driving Financial Model

The Veterinary School timeline, Murray State stakeholder discussions, market research, and competitive analysis inform the drivers behind the financial model.

	Line Item	Forecast Approach	Moderate Driver	Conservative Driver
REVENUES	Enrollment	Murray State Proposal Materials, Market Research and Peer Comparisons	Target enrollment of 70 students per year provided by Murray State. Annual attrition of 7% is calculated based on AAVMC enrollment data.	Conservative enrollment is calculated as 85% of target enrollment. Conservative annual attrition rate estimated at two percentage points higher (9%).
REVENUES	Tuition & Fees	Murray State Proposal Materials, Market Research and Peer Comparisons	Tuition rates were provided by Murray State ($29,000 and $50,750 per year for in-state and out-of-state students respectively) in FY27. This pricing is competitive with first year resident tuition and fees at peer colleges of veterinary medicine. Tuition rate is expected to grow at 3% annually. Per Murray State, there is no plan to offer additional scholarships or institutionally funded grants to admitted students.	Tuition pricing is set the same as the moderate scenario and is expected to grow at 2%.
REVENUES	Other Operating Revenues	Murray State Proposal Materials	Estimates for the use of University Private Funds during construction period and first year of operations to fund initial start-up costs were shared by Murray State.	Same assumptions as moderate model.
EXPENSES	Faculty and Staff Salary and Benefits Costs	Murray State Proposal Materials, Murray State Historical Trends, Market Research and Peer Comparisons	Faculty and staff headcounts were calculated based on an analysis of peer institutions using the distributive model. Murray State is estimated to need to hire two administrators, fifteen faculty, and 40 staff. The number of faculty has been adjusted to account for the additional ten current faculty that Murray State anticipates supporting the Veterinary School. The personnel FTE targets initially provided by Murray State were below those of peer institutions and were subsequently adjusted by the project team to align with peer figures. Personnel salaries were provided by Murray State at $132,000 for Faculty, $44,000 for Staff, and $214,500 for Administrators. Personnel salaries forecast a 2% annual increase, based on the history of cost-of-living increases by the institution, other Kentucky public universities, and the Commonwealth. Start-up packages are not included in the model, as Murray State indicated that they do not anticipate significant cost from start-up packages for new personnel. Employee Benefits are projected at 45%, of compensation, in line with existing Murray State Operations.	Faculty and staff headcounts are the same as the moderate model. Conservative faculty and admin salaries are estimated at 15% higher than moderate scenario. Staff salaries are held constant. Conservative annual growth rate estimated at one percentage point higher than the moderate scenario (3%). Employee benefits are projected at the same rate as the conservative scenario.
EXPENSES	Rotation Payments	Murray State Proposal Materials and Market Research	Rotation Payment estimates were shared by Murray State and assume $12k fee per student per year. Rotation payments forecast a 2.7% annual increase, based on the ten-year average of annual inflation rates from the Bureau of Labor Statistics/ Consumer Price Index.	Conservative rate per student estimated at 15% higher than moderate scenario. Conservative annual growth rate estimated at 4% based on five-year average of annual inflation rates from the Bureau of Labor Statistics/ Consumer Price Index.
EXPENSES	All Other Operating Expenses	Murray State Proposal Materials	Estimates for Other Operating Expenses were shared by Murray State and are projected out assuming a 2% annual increase, based on the institution's historical expense growth rates and annual adjustments of comparative research programs. These expenses are meant to estimate all other operating costs excluding salary/fringes.	Conservative annual growth rate estimated at one percentage point higher than the moderate scenario (3%).
EXPENSES	Facilities Expense	Murray State Proposal Materials	Murray State is currently not planning to build new facilities to house the vet school. Instead, they are planning the construction of a new Veterinary Sciences building that will serve the needs of future veterinary students as well as students in their pre-vet and vet tech programs, which they have already secured funding for. Murray State plans to commence this construction project independent of the vet school. As such, these expenses are not included in the financial model, as they are not fully attributable to the vet school.	Same assumptions as moderate model.

Sources: AAVMC Public Data; U.S. Bureau of Labor Statistics

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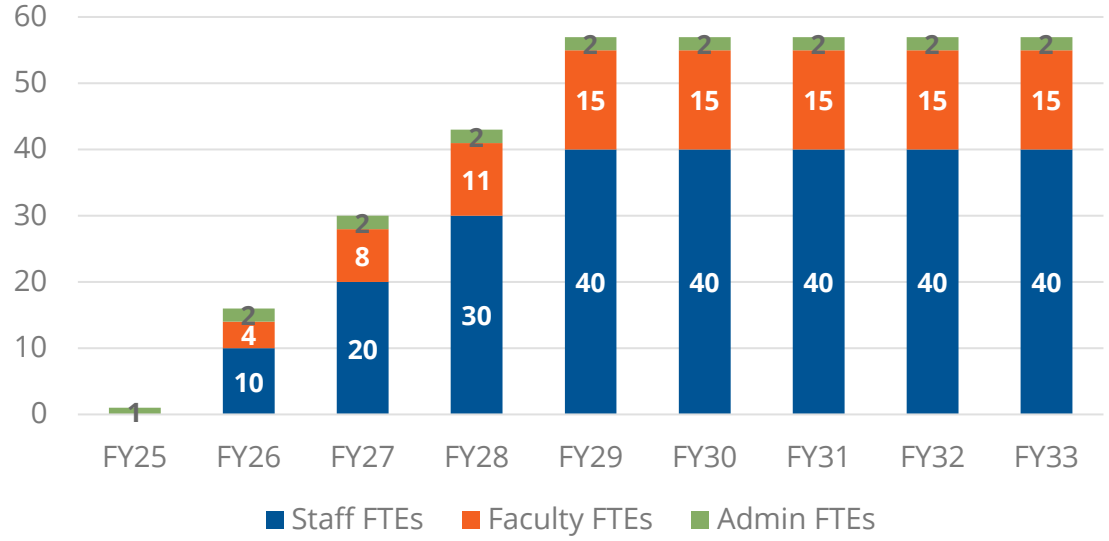
Staffing and Enrollment Assumptions

Faculty and staff, beginning with the Founding Dean, will be added gradually to support operations and anticipated enrollments as the Veterinary School matures to steady state operations in FY2030 and beyond.

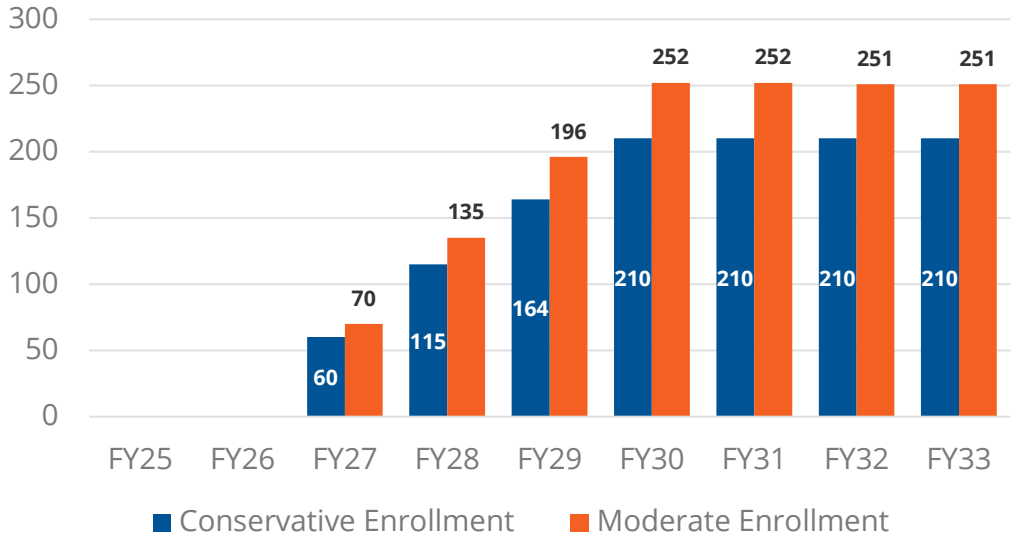
Faculty and Staff Ramp-up, FY26 – FY33[1]

- The Veterinary School Founding Academic Dean is hired and onboarded in FY25.
- Initial faculty are hired starting in FY26 and the required fifteen FTEs are in place by FY29. Per Murray State, an additional ten existing Faculty FTEs will support the Veterinary School.
- Staff includes Finance, IT, Academic Affairs, Research, Student Affairs, Professional Development, Clinical Affairs, and Clinical Education professionals.



Enrollment Ramp-up, FY26 – FY33[2]

- Assuming moderate enrollment, the first class begins in FY27 at 70 students, with total enrollment reaching 251 students at full capacity.
- Under the conservative model, the first class begins in FY27 at 60 students, with total enrollment reaching 210 students at full capacity.



Notes: 1) Total faculty and staff assumptions are calculated based on analysis of personnel headcounts at peers using the distributive model and account for existing faculty FTEs that Murray State has indicated will support the Veterinary School; 2) Enrollment at "steady-state" does not reach 280 as the model moderately assumes anticipated annual attrition of 7%, in line with the reported AAVMC enrollment data. Source: AAVMC Public Data.

Moderate Projection – Veterinary School Pro-forma Operating Results

The operating results[1] in the moderate projection represents the most likely scenario with many estimates provided directly by Murray State.

Income Statement - Moderate Scenario *$000s*	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
Enrollment	-	-	70	135	196	252	251	251	252	252	252
Faculty FTEs	-	4	8	12	15	15	15	15	15	15	15
Staff FTEs	-	10	20	30	40	40	40	40	40	40	40
Administrator FTEs	1	2	2	2	2	2	2	2	2	2	2
Revenues:											
Tuition & Fees	$ -	$ -	$ 1,478	$ 2,966	$ 4,467	$ 10,742	$ 11,151	$ 11,600	$ 12,067	$ 12,553	$ 13,077
Total Operating Revenues	-	-	1,478	2,966	4,467	10,742	11,151	11,600	12,067	12,553	13,077
Operating Expenses:											
Faculty and Staff Salaries	215	1,397	2,412	3,468	4,424	4,513	4,603	4,695	4,789	4,885	4,982
Employee Benefits	-	629	1,086	1,560	1,991	2,031	2,071	2,113	2,155	2,198	2,242
Rotation Payments		-	-	-	-	676	689	703	717	726	746
Other Operating Expenses	250	2,197	2,603	3,637	3,710	3,784	3,860	3,937	4,016	4,096	4,178
Total Operating Expense	465	4,223	6,101	8,665	10,125	11,003	11,223	11,448	11,677	11,905	12,149
Operating Income	$ (465)	$ (4,223)	$ (4,623)	$ (5,699)	$ (5,658)	$ (262)	$ (72)	$ 152	$ 390	$ 648	$ 928
Operating Margin %	*N/A*	*N/A*	*-312.8%*	*-192.1%*	*-126.6%*	*-2.4%*	*-0.6%*	*1.3%*	*3.2%*	*5.2%*	*7.1%*
Non Operating Income:											
University/Private Funds	1,247	1,270	-	-	-	-	-	-	-	-	-
Total Non Operating Income:	$ 1,247	$ 1,270	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Net Surplus/(Deficit) -	$ 782	$ (2,952)	$ (4,623)	$ (5,699)	$ (5,658)	$ (262)	$ (72)	$ 152	$ 390	$ 648	$ 928
Net Surplus/(Deficit) %	*N/A*	*N/A*	*-312.8%*	*-192.1%*	*-126.6%*	*-2.4%*	*-0.6%*	*1.3%*	*3.2%*	*5.2%*	*7.1%*

Key Takeaways

- **Operating Income Driven by Tuition Revenues:** Revenues are driven by tuition and fees, which are projected to **reach $13M by FY35** as the Veterinary School operates at full enrollment capacity.
- **Largest Expenses Due to Faculty Salary/Benefits:** Murray State intends to leverage ten existing faculty in the program to limit the amount of net new investment needed. ~15 new faculty hires will drive $3.1M in annual expenses for the program in FY32.
- **Vet School Projected to Breakeven Under Current Assumptions:** At steady-state operations, under current assumptions, **the veterinary school is expected to breakeven** in FY32 and generate moderate surpluses thereafter. Under these assumptions, it will not require internal subsidization and/or state support to sustain its operations.

Note: 1) Assumptions detailed earlier in this section of the report on Slide 85.

Conservative Projection – Veterinary School Pro-forma Operating Results

The operating results[1] in the conservative projection represents the financial impact of a "worst case" scenario.

Income Statement - Conservative Scenario *$000s*	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
Enrollment	-	-	60	115	164	210	210	210	210	210	210
Faculty FTEs	-	4	8	11	15	15	15	15	15	15	15
Staff FTEs	-	10	20	30	40	40	40	40	40	40	40
Adminstrator FTEs	1	2	2	2	2	2	2	2	2	2	2
Revenues:											
Tuition & Fees	$ -	$ -	$ 1,255	$ 2,468	$ 3,644	$ 8,648	$ 8,911	$ 9,183	$ 9,463	$ 9,751	$ 10,048
Total Operating Revenues	-	-	1,255	2,468	3,644	8,648	8,911	9,183	9,463	9,751	10,048
Operating Expenses:											
Faculty and Staff Salaries	247	1,555	2,681	3,711	4,967	5,116	5,269	5,427	5,590	5,758	5,930
Employee Benefits	111	700	1,206	1,670	2,235	2,302	2,371	2,442	2,515	2,591	2,669
Rotation Payments	-	-	-	-	-	624	643	662	682	702	723
Other Operating Expenses	250	2,197	2,603	3,637	3,746	3,859	3,975	4,094	4,217	4,343	4,474
Total Operating Expense	608	4,452	6,490	9,018	10,948	11,900	12,257	12,625	13,004	13,394	13,796
Operating Income	$ (608)	$ (4,452)	$ (5,236)	$ (6,550)	$ (7,304)	$ (3,253)	$ (3,346)	$ (3,443)	$ (3,541)	$ (3,643)	$ (3,748)
Operating Margin %	*N/A*	*N/A*	*-417.3%*	*-265.4%*	*-200.4%*	*-37.6%*	*-37.6%*	*-37.5%*	*-37.4%*	*-37.4%*	*-37.3%*
Non Operating Income:											
University/Private Funds	1,247	1,270	-	-	-	-	-	-	-	-	-
Total Non Operating Income:	$ 1,247	$ 1,270	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Net Surplus/(Deficit) -	$ 639	$ (3,182)	$ (5,236)	$ (6,550)	$ (7,304)	$ (3,253)	$ (3,346)	$ (3,443)	$ (3,541)	$ (3,643)	$ (3,748)
Net Surplus/(Deficit) %	*N/A*	*N/A*	*-417.3%*	*-265.4%*	*-200.4%*	*-37.6%*	*-37.6%*	*-37.5%*	*-37.4%*	*-37.4%*	*-37.3%*

Key Takeaways

The delta between moderate and conservative is driven by the following key assumptions:

1. Lower than expected enrollments driving lower tuition revenues: **$2.1M impact in FY30**
2. Higher than expected faculty salaries needed to attract and retain quality faculty: **$0.5M impact in FY30**

The conservative scenario also assumes expenses will grow at higher than historical rates (3% vs. 2% annually).

The resulting net surplus assumes all conservative assumptions are triggered.

Notes: 1) Assumptions detailed earlier in this section of the report on Slide 85. 2) Total operating expenses are lower under conservative projections because in this scenario, the CVM is projected to enroll fewer students, resulting in lower expenses from rotation payments, which are calculated based on enrollments in years 3 and 4 of the DVM program.

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Potential CVM Benefits on Regional Economy

A veterinary school at Murray State would not just help to source a new, in-demand student population, but also provide a substantial economic benefit to the surrounding region.

A CVM may generate significant economic impact:

$85M One-Time **$46.3M** Annual Recurring Economic Impact In Calloway County

Based on estimated hiring needs (i.e., new jobs), a new CVM is estimated to generate $46.3M in economic output in Calloway County, including an estimated $16.8M in labor wages associated with 175 total jobs annually.

Capital projects planned in conjunction with the CVM launch are estimated to support a total of 777 jobs during the period of construction ($32.3M in labor income) and generate a total of $85.4M in economic output. (Note that current construction on new facilities will commence regardless of Murray State receives approval to launch the CVM.)

$107M One-Time **$19.1M** Annual Recurring Economic Impact In Kentucky

Based on estimated hiring needs (i.e., new jobs), a new CVM is estimated to generate $19.1M in economic output in Kentucky, including an estimated $8.1M in labor wages associated with 113 total jobs annually.

Capital projects planned in conjunction with the COM launch are estimated to support a total of 783 jobs during the period of construction ($45.9M in labor income) and generate an additional $107.4M in economic output. (Note that current construction on new facilities will commence regardless of Murray State receives approval to launch the CVM.)

A new college of veterinary medicine may also:

- **Expand access to veterinary medical care** to residents of the Murray region and Kentucky more broadly.
- **Expand veterinary education opportunities** for residents of western Kentucky and its surrounding region.
- **Produce new research** on animal health and welfare that benefits industry in the Commonwealth of Kentucky.

Sources: IMPLAN Model, 2022 Data Year, using inputs provided by Murray State and IMPLAN model data for the State of Kentucky and Calloway County

Student Demand

Overall Feasibility Assessment

Student Demand

G

Student demand for seats in DVM programs is high, even amid growth in the program pipeline as new CVMs launch.

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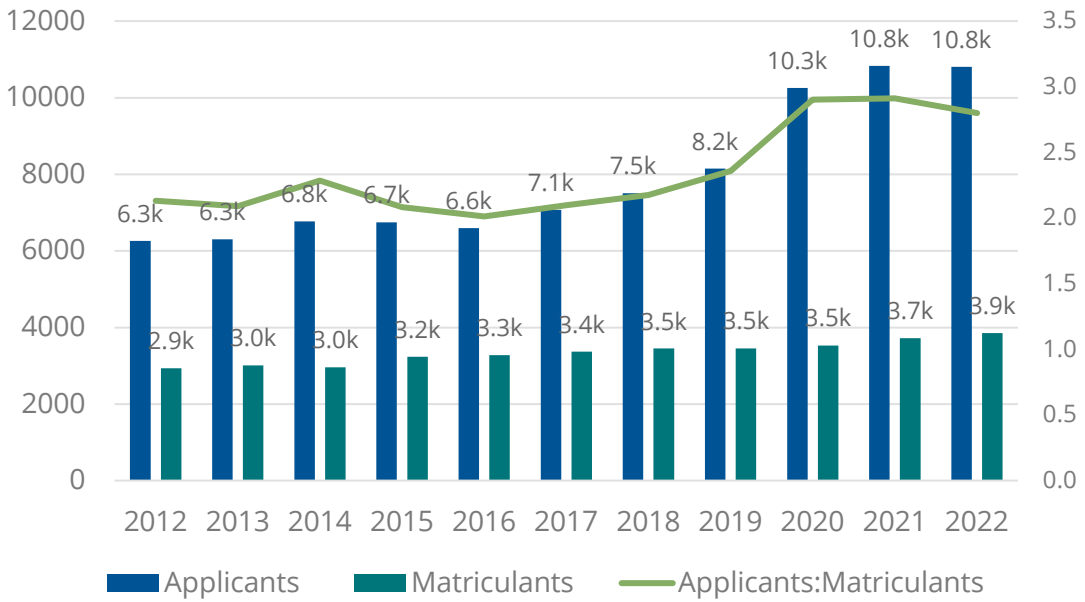
National & Regional Veterinary School Demand

Nationally, Student Demand for Seats in Veterinary School Outpacing Supply

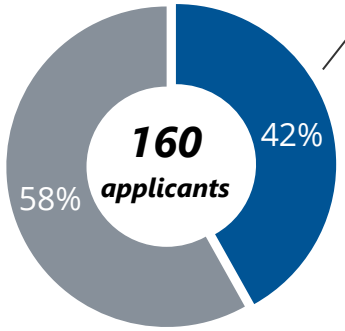
Over the last decade (2012-2022) the AAVMC reported a 72.6% rise in total applications to national veterinary colleges, while the number of US DVM first year seats has increased by 31.6%. In 2022, only 44% of applicants matriculated to U.S. Veterinary schools.

Total U.S. Veterinary Applicants and Matriculants



In Kentucky, Veterinary Medical School Demand Mirrors National Trends, with Large Applicant Pools for Small Number of Seats

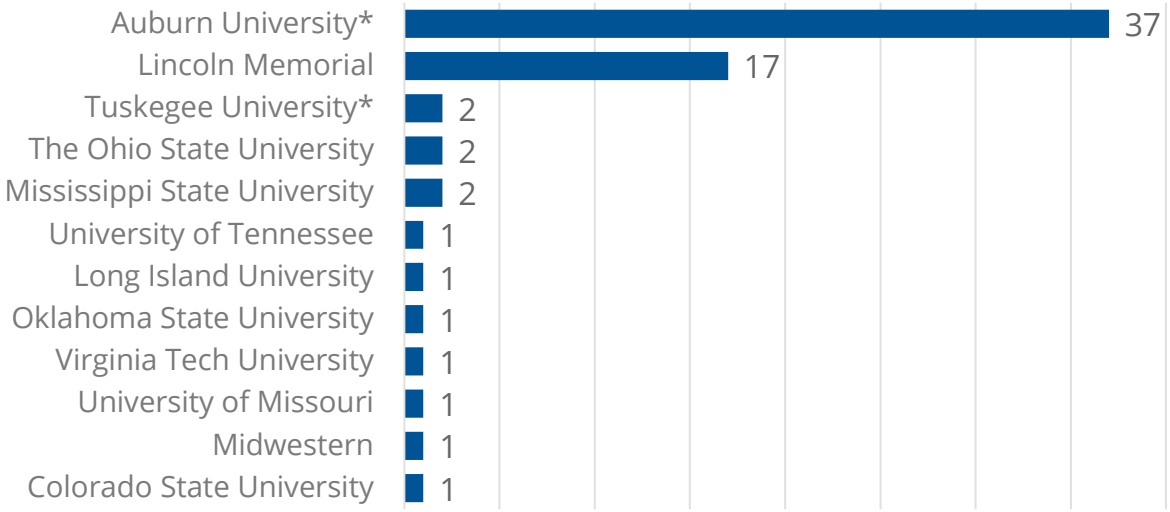
In 2023, 160 Kentucky residents applied to DVM Programs



67 matriculants to US DVM Programs
93 applicants who did not matriculate

Applicants-to-Matriculants
2.4-to-1

Accepted Kentucky Residents by Veterinary School



* Auburn and Tuskegee have an established agreement under Kentucky Veterinary Contract Spaces Program that hold seats for KY residents in their classes each year (38 at Auburn and 3 at Tuskegee)

Sources: AVMA Accredited Colleges; AAVMC Annual Report; AAVMC Admitted Student Profiles.

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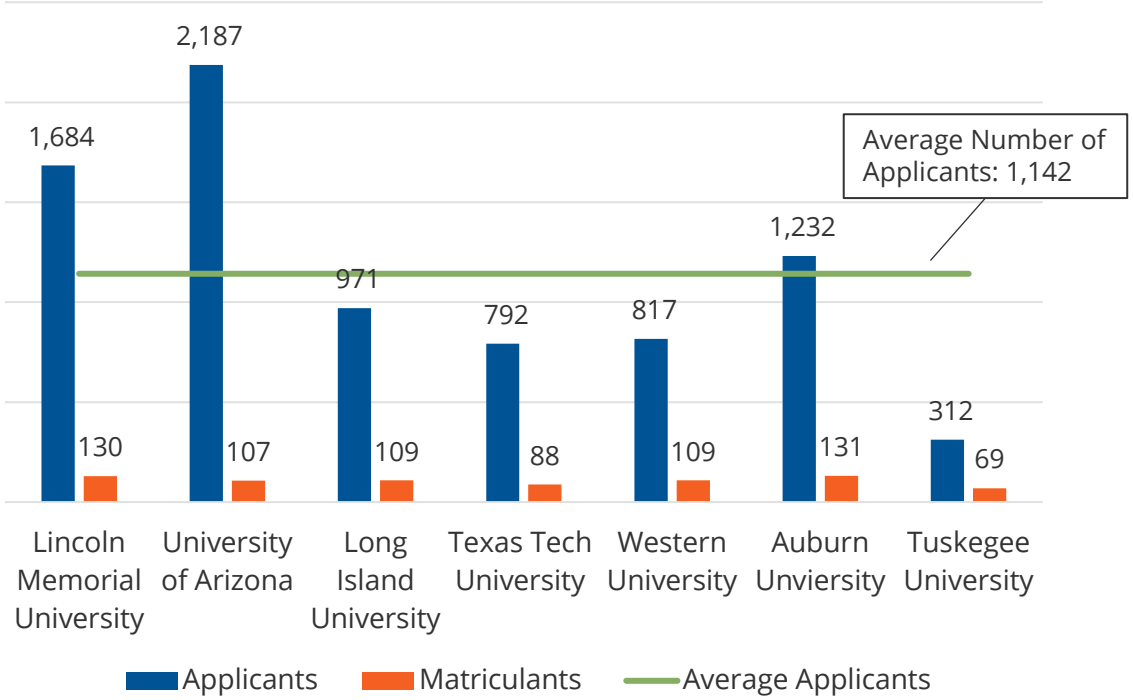
Select Peer Admissions Statistics

Peer Applicants and Matriculants

Among select peer veterinary education programs, the **average number of applicants exceeded 1,100 in 2023,** which is the most recently reported entering year**.** By comparison, average matriculants totaled less than 110 students.

Total Veterinary Applicants and Matriculants at Peer Institutions



Applicants & Matriculants at Recently Opened Vet Schools Using Distributive Model of Clinical Education

	First Year		*Latest Year (2023)*	
Institution	Applicants	Matriculants	Applicants	Matriculants
Lincoln Memorial University (TN) *Opened 2014*	367	96	1,684	130
University of Arizona (AZ) *Opened 2020*	518	110	2,187	107
Long Island University (NY) *Opened 2020*	450	107	971	109
Texas Tech University (TX) *Opened 2021*	617	64	792	88

Recently established veterinary schools are experiencing high application volumes relative to their class sizes, suggesting that, to this point, demand for seats in DVM programs continues to outpace supply.

The **average incoming GPAs for newer vet schools was 3.5** compared to **3.6 at established schools** in 2023, suggesting that recently established veterinary schools continue to enroll qualified applicant pools.

Sources: AVMA Accredited Colleges; AAVMC Annual Report; AAVMC Admitted Student Profiles.

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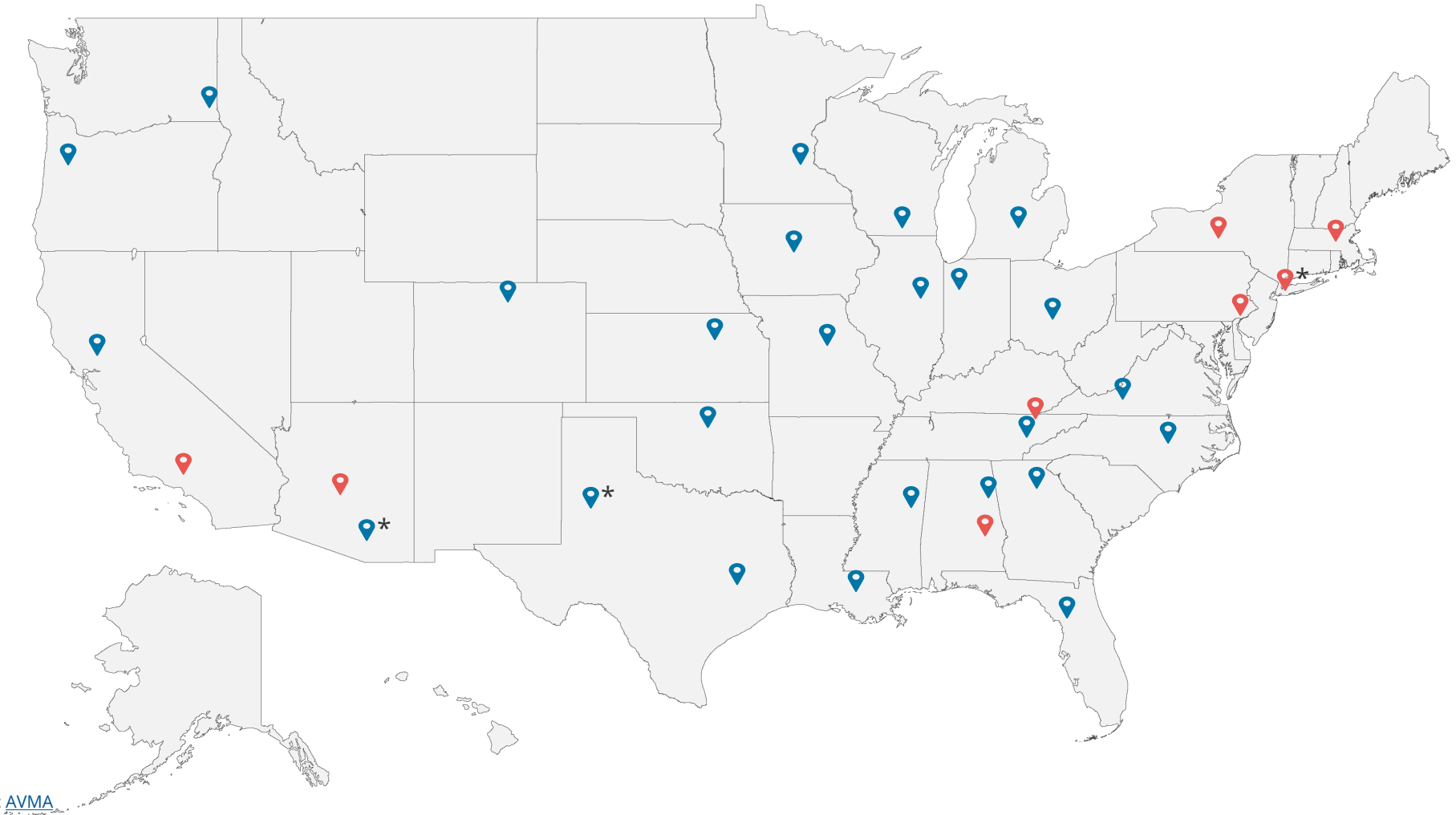
Landscape of Veterinary Schools

AVMA accredits 30 veterinary schools and three schools with provisional accreditation. There are currently fifteen additional veterinary schools in various stages of the development process.

Fully Accredited CVMs as of 2024



- Public
- Private
- * Provisionally Accredited

13,323

Veterinary students in the US as of 2019

Sources: AVMA

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Planned New DVM Programs and Seat Expansions | Timeline

Fifteen additional colleges of veterinary medicine are in various stages of development. Of those, three have already welcomed their inaugural classes and are working towards full accreditation.

***** Using or planning to use Distributive Model of Clinical Education

2020

- **University of Arizona* (AZ):** Pre-Accredited
- **Long Island University* (NY):** Pre-Accredited

2021

- **Texas Tech University* (TX):** Pre-Accredited

2024

- *25 seats from university expansions*

2025

- **Lyon College* (AR)**
- **Lincoln Memorial University – Orange Park Campus* (FL)**
- **Rowan University (NJ)**
- **Utah State University* (UT)**
- *152 seats from university expansions*

2026

- **Arkansas State University (AR)**
- **Chamberlin University (GA)**
- **Clemson University* (SC)**
- **University of Maryland Eastern Shore (MD)**
- **Rocky Vista College (MT)**
- *20 seats from university expansions*

2027

- **Hanover College* (IN)**
- **Midwestern University (IL)**
- *10 seats from university expansions*

2028

- *10 seats from university expansions*

The accreditation of all fifteen colleges will result in a **45% increase in DVM Programs in the U.S.**
Based on proposed class sizes, by 2028, there will be an **additional 1,500 first-year seats** derived from both new programs and expansion of existing programs.

Sources: A proliferation of newly proposed veterinary colleges | American Veterinary Medical Association; Demand for and Supply of Veterinarians in the U.S. to 2032.

MURRAY STATE | COLLEGE OF VETERINARY MEDICINE

KY Contract Spaces Program at Auburn and Tuskegee

KY currently funds seats for a select number of KY residents at two DVM programs, which allows students to pay in-state tuition rates. The cost of these programs to students, coupled with their history of serving the KY veterinary workforce, **position these programs as strong competitors with Murray State for Kentucky-resident DVM students**, if the contract spaces program continues to receive funding.

Contract Spaces Program Overview

The most recent Executive Branch budget bill (HB 200, 2018) funds 164 spaces at **Auburn University College of Veterinary Medicine** and **Tuskegee University College of Veterinary Medicine:**

- 152 total seats at Auburn, 38 first-year seats
- 12 total seats at Tuskegee, 3 first-year seats

Other Auburn Vet Commitments to KY

Auburn participates in the USDA-NIFA Veterinary Service Grant Program (VSGP), which helps place graduates from the CVM in rural Kentucky[1]:

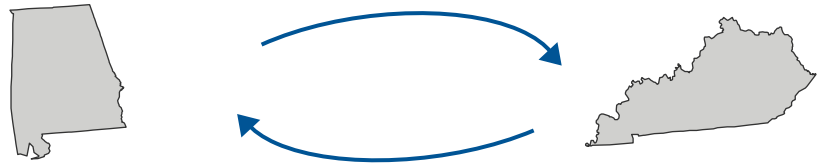
- Grant designed to recruit and advance students interested in rural service
- Offers internships/preceptorships and matches students with rural practices
- Of the 20 identified students participating in the partnership, 19 have entered rural practice after graduating

By the Numbers

130 Kentucky applicants for 38 seats at Auburn CVM in 2023

$5.3M Cost to Commonwealth in 2024 to fund KY students at Auburn and Tuskegee

67% of KY residents with Auburn University Vet degrees returned to KY



Notes: 1) Both Auburn and Tuskegee participate in this program, but data is only available from Auburn. Sources: Grant Strengthens Veterinary Medicine in Rural Kentucky – Auburn Veterinarian – Auburn University | College of Veterinary Medicine; Report of the Veterinary Medicine Contract Spaces Working Group to Interim Joint Committee on Appropriations and Revenue; KHEAA Report on Optometry Scholarship & Veterinary Contract Spaces 2024; Peer Benchmarking Interviews.

Murray State Differentiating Factors

While the market for veterinary students is increasingly competitive due to new program entrants, the following differentiating factors may help Murray State compete for students over competitor programs.

- Murray State's CVM would be the first offering in the Commonwealth. Kentucky residents can currently receive in-state tuition rates at Auburn and Tuskegee through the contract spaces program, minimizing the relative competitive advantage of offering in-state tuition. However, the College's location in western Kentucky may be appealing to some applicants who wish to stay close to home for further education.

- Murray State University currently offers a range of programs that highlight their expertise in animal science, including Veterinary Technology, Pre-Veterinary Medicine, and Animal/Equine Science. These programs could serve as a pipeline to the veterinary school and increase Murray's credibility in veterinary medicine for potential applicants.

- Because Murray State is rurally located, they may be positioned to attract rural Kentucky students and establish partnerships with rural clinics.

Workforce Alignment

Overall Feasibility Assessment

Workforce Alignment

Y

Industry experts disagree about the demand for new veterinarians at the national level, though there is an undisputed shortage of rural large animal vets in KY. Some experts purport that a CVM cannot meaningfully address the rural shortage, though Murray has a record of successfully placing graduates in rural settings.

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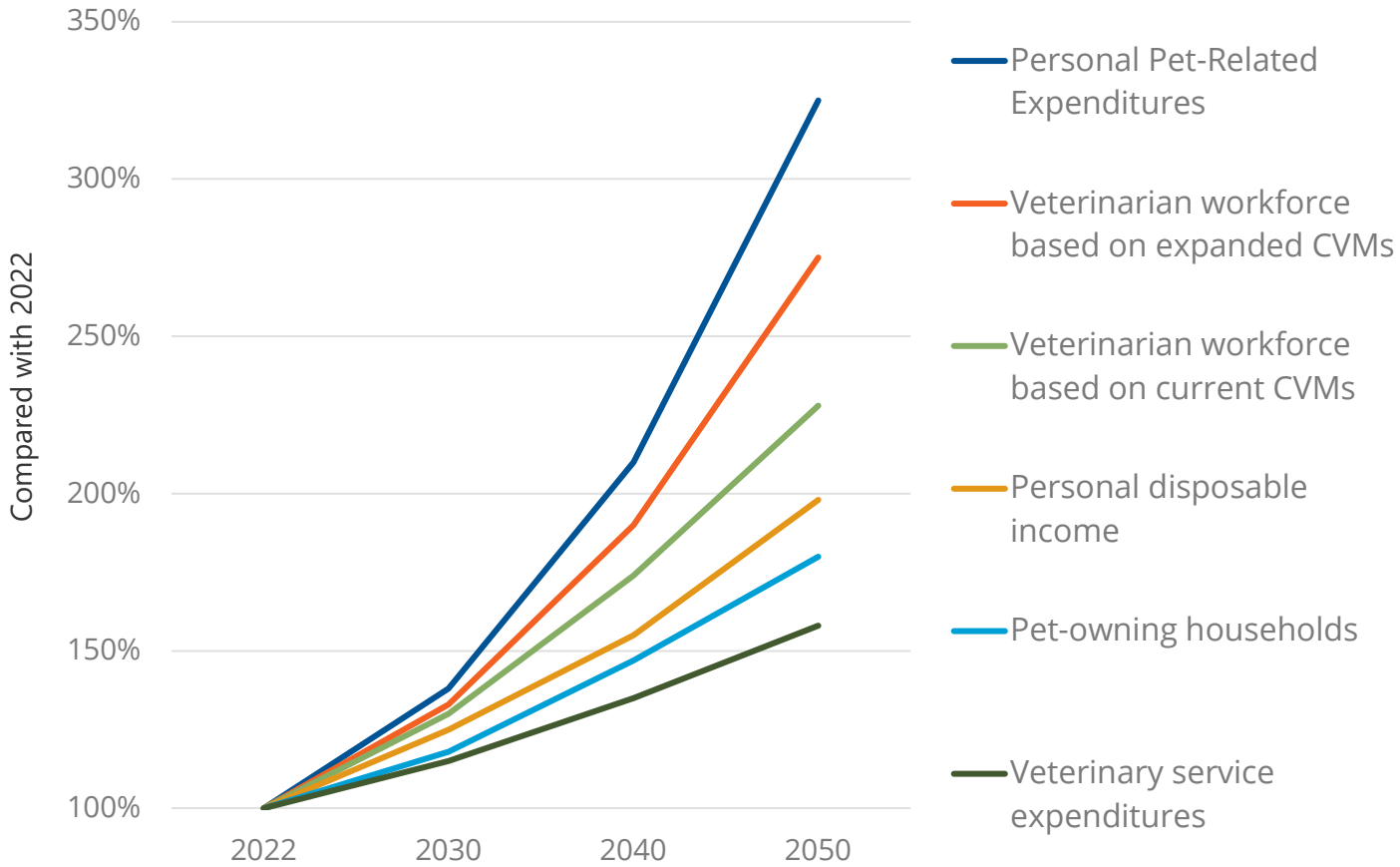
National Demand for Veterinarians

Recently released data study commissioned by the American Veterinary Medical Association (AVMA) does not forecast a national shortage of veterinarians.

Brakke Consulting's Analysis of the Veterinary Workforce
Projected Growth of Supply & Demand Factors (Fall 2024)



Key Takeaways from Brakke Consulting's Veterinary Workforce Forecast Project

- The report indicates that **the current supply of veterinary school graduates is sufficient to meet workforce demand** through 2035.
- Accounting for new CVMs in planning stages and some established CVMs planning to grow their class sizes, if all 13 proposed veterinary schools are accredited, the **veterinary workforce could increase by nearly 40%** in a decade.
- Beyond 2035, the **number of veterinarians may exceed demand**, potentially risking the economic health of the profession unless there is a significant increase in the utilization of veterinary services.

Sources: AVMA - No Dire Shortage of Veterinarians Anticipated in Coming Years Report, AVMA - Straight Talk About Veterinary Workforce Issues, AVMA - Chart of the Month: No Dire Shortage of Veterinarians Needed.

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Shortage of Veterinarians in Rural Areas

Although the national supply of veterinarians is expected to meet overall demand until 2035 and exceed it thereafter, rural areas, including much of Kentucky, are currently experiencing veterinarian shortages.

Rural Veterinary Shortage Areas Currently Observed Across Most of the US

In 2023, the National Institute of Food and Agriculture (NIFA) designated **237 rural veterinary shortage areas** across **47 states** in the US, including Kentucky.

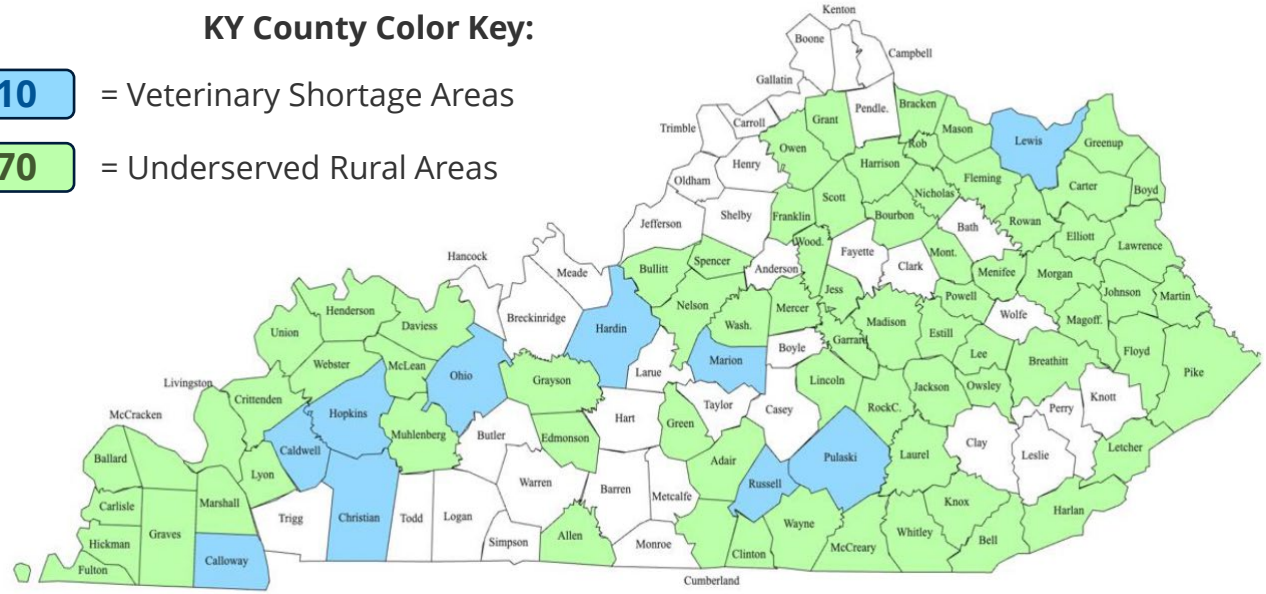
- In 2023, the AVMA reported that only 19.5% of veterinarians practice in rural areas
- Among veterinarians working in suburban areas, only 5% would prefer to work in a rural area
- Among veterinarians working in urban areas, 8.1% would prefer to work in a rural area
- 87% of veterinarians currently working in rural areas prefer to remain there, indicating a strong preference for their rural location

Veterinary Shortage and Underserved Rural Areas in Kentucky

KY County Color Key:

10 = Veterinary Shortage Areas

70 = Underserved Rural Areas



Note: **Veterinary shortage service area** are defined through implementation of a shortage nomination process, where nominations are reviewed by an external panel of veterinary experts and provided a designation.
Underserved rural area means an area of Kentucky, as designated by the KY State Veterinarian, with a low ratio of practicing veterinarians to livestock in a city with a population of less than twenty-five thousand (25,000) and more than twenty (20) miles from a city with a population of more than fifty thousand (50,000).

Sources: AVMA Report, AVMA Press Release, AVMA. KHEEA KRVLRP, USDA-NIFA VSGP, VMLRP, VMLRP FAQ , AVMA Report on the Economic State of the Veterinary Profession (2024).

Shortage of Veterinarians in Rural Areas, Continued

Veterinary experts believe that a lack of incentives for students to go into large animal care in rural areas—not a lack of veterinary students—is the greatest contributor to the rural veterinarian shortages in Kentucky and nationally.

Characteristics of the DVM student population driving them towards companion animal practices in suburban and urban environments:

Majority of Students from Urban/Suburban Areas

According to the AVMA, ~80% of all incoming veterinary students, on average, come from urban or suburban areas and intend to seek employment in urban or rural locations.

High Student Debt Levels Among Many DVM Graduates

According to the AVMA, median salaries for associates in companion animal predominant and exclusive practices are $110k and $125k, respectively, compared to $91k in food animal and $95k in mixed animal practices. Higher-paying fields may be particularly attractive to new DVM graduates, as the average debt for new DVM graduates in 2023 was $154,451.

76% of surveyed Kentucky veterinarians do not believe that the current lack of an in-state veterinary school is contributing to the rural veterinary shortage.

Sources: KVMA Membership Survey regarding a proposed KY Veterinary School; AVMA Report on the Economic State of the Veterinary Profession (2024); 2019-Admissions-Analysis-Monograph.pdf.

Faculty Recruitment

Overall Feasibility Assessment

Faculty Recruitment

Y

There is presently a shortage of veterinary faculty in the US, which is positioned to worsen as planned new vet schools launch in the next decade. Murray State has several existing veterinary faculty on staff who can teach in this program, mitigating the risk.

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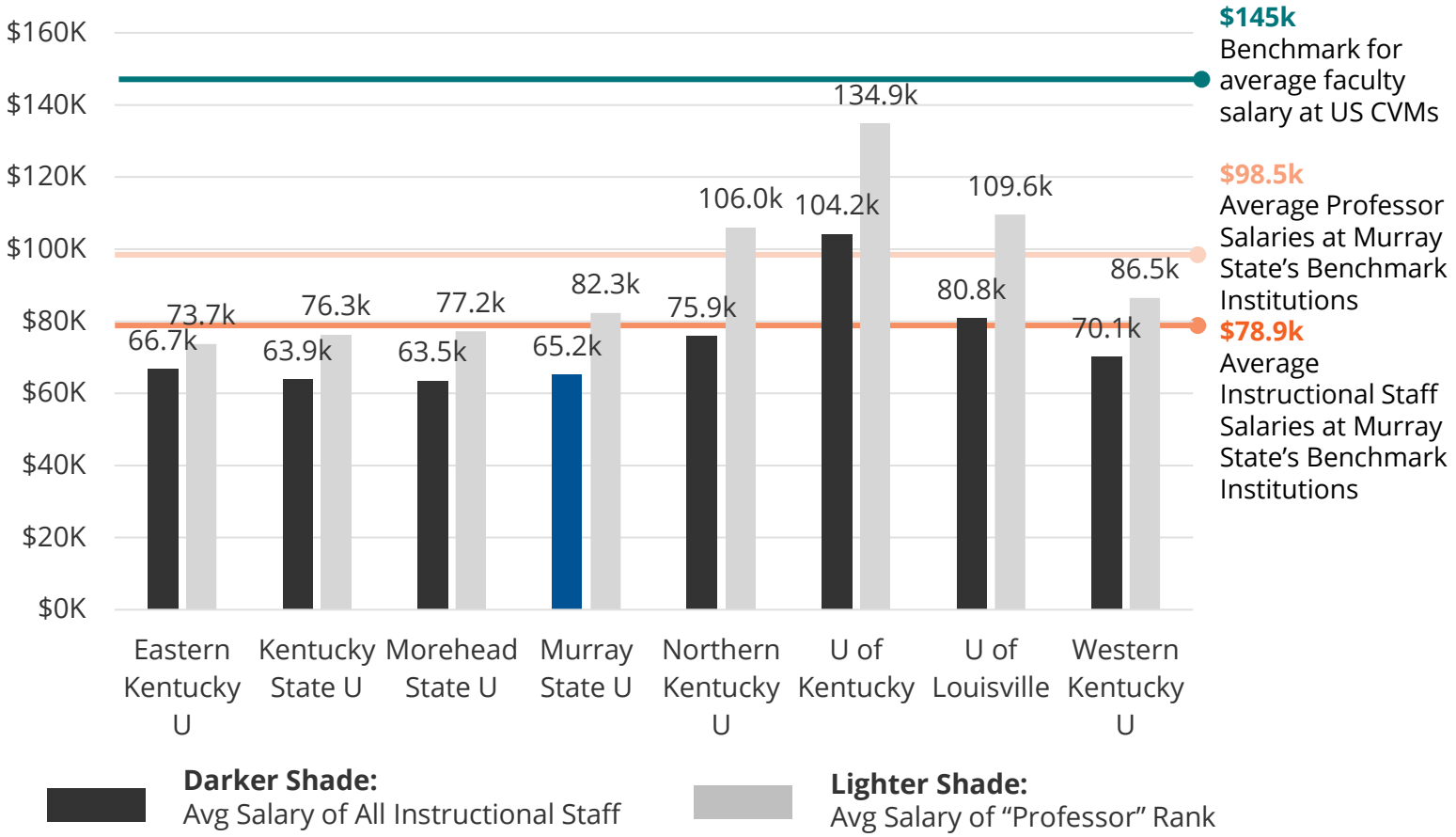
Murray State Faculty Recruitment Considerations

Murray State's average instructional salaries in AY2022-23 were on the lower end of Kentucky peers and considerably lower than benchmark peers. The proposed veterinary medicine faculty range is $121,000 – $161,000, well above averages for both sets of peers.

Average Salaries of Full-Time Instructional Nonmedical Staff equated to 9-Months Worked, by Academic Rank: Academic Year 2022-23[1]



Key Takeaways

- **Murray State's average professor salaries are in the top half of Kentucky regional comprehensives,** while their average instructional salaries are lower than most of their KY peers and lower than eighteen of the nineteen identified peer benchmark institutions.
- **Murray State's proposed CVM faculty salaries range is aligned with industry averages.** Murray State is planning to offer CVM faculty salaries in the range of **$121k-$161k.** In comparison, the average US CVM faculty salary is $145k.
- **Murray State CVM's founding dean may be among the highest paid faculty or staff member at the institution**, based on peer analysis.

Notes: 1) Reflects IPEDS "All instructional staff total of Average salaries of full-time instructional nonmedical staff equated to 9-months worked, by academic rank : Academic year 2022-23;" 2) See Appendix for full list of Murray State Benchmark Peers. Sources: IPEDS Data Center; Murray State Benchmark Institutions, AVMA Report on the Economic State of the Veterinary Profession (2024), peer interviews

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Veterinary Medicine Faculty Hiring Market Overview

The American Association of Veterinary Medical Colleges (AAVMC) reports a current shortage of veterinary faculty, which creates a risk that Murray State may struggle to recruit sufficient faculty at new Colleges of Veterinary Medicine.

AAVMC Data on National Veterinary Faculty Shortage

474 Funded & Unfilled Veterinary Medicine Faculty Positions in 2023

10% of all positions in the current veterinary faculty workforce are unfilled

1,000 Funded & Unfilled Veterinary Faculty Positions Projected by 2030

Murray State CVM Faculty Hiring Projections

25 Estimated faculty FTEs needed to run CVM using distributive clinical education mode at proposed student enrollment levels

10 Current Murray State faculty expected to teach in vet school

15 Expected CVM hiring needs in first four years of the program

Due to the national shortage of veterinary faculty, Murray State University may struggle to attract candidates. This challenge is compounded the **nascency of the program**, making it difficult to compete with the high-paying private sector and more established peer institutions. Although some local veterinarians have shown interest in teaching and providing rotational sites, no formal agreements have been made.

Sources: AAVMC Faculty Shortage Overview, AVMA Report on the Economic State of the Veterinary Profession (2024), peer interviews

Accreditation Standards

Accreditation Standards

Y

To meet accreditation standards, Murray State will need to invest significantly to provide sufficient facilities for the housing of animals used in teaching and research, to satisfactorily produce substantial related research, and to ensure quality of education and facilities at distributed clinical sites.

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Accreditation Standards | Overview

The American Veterinary Medical Association Council on Education (AVMA COE) sets forth eleven standards, including 78 individual elements, for the accreditation of new colleges of veterinary medicine to ensure high-quality education and training for veterinary students.[1]

1. Organization
2. Finances
3. Physical Facilities and Equipment
4. Clinical Resources
5. Information Resources
6. Students
7. Admission
8. Faculty
9. Curriculum
10. Research Programs
11. Outcomes Assessment

Note: 1) In addition to AVMA COE accreditation standards, Murray State will also need to comply with all applicable SACSCOC accreditation processes, including those for Substantive Changes. Source: AVMA Accreditation Standards

Accreditation Standards | Key Challenges and Risks (1 of 2)

Of the eleven AVMA COE accreditation standards, the following six represent the most significant and challenging for Murray State.

Standard	Requirement	Risk
2 Finances	- Financial stability to sustain educational programs.	- A new CVM will require significant startup and recurring operating funding. Operating expenses at steady state are estimated in the range of $11.0M - $12.1M per year.
3 Physical Facilities and Equipment	- Facilities for the housing of animals used for teaching and research shall be sufficient in number, properly constructed, and maintained in a manner consistent with accepted animal welfare standards. - Off-campus required training sites must be directly (in-person) and regularly (no less than annually) inspected and overseen by qualified college personnel to provide a safe and effective learning environment.	- Murray State is currently not planning to build new facilities to house the vet school. Instead, they are planning the construction of a new Veterinary Sciences building that will serve the needs of future veterinary students as well as students in their pre-vet and vet tech programs, which they have already secured funding for from the legislature. Murray State plans to commence this construction project independent of the vet school. - Deans of peer veterinary programs using a distributive model of clinical education expressed concerns that Murray State was not fully appreciating and planning for the full range of facilities needs to successfully operate a CVM, noting that curricular and compliance needs for a DVM program are distinct from animal sciences programs.
4 Clinical Resources	- Adequate clinical resources, including availability of diverse animals and variety of patients. - Supervision of all clinical sites, whether on-campus or off-campus.	- Distributive model introduces potential variance in the clinical experiences of students. - Ensuring all clinical partners meet the required standards for educational quality and safety requires dedicated resources, robust communication and coordination. Peer programs using distributive models of clinical education staff ~5 FTEs to administer clinical education programs.

Sources: AVMA Accreditation Standards, peer benchmarking interviews

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Accreditation Standards | Key Challenges and Risks (2 of 2)

Of the eleven AVMA COE accreditation standards, the following six represent the most significant and challenging for Murray State.

Standard	Requirement	Risk
8 Faculty	- Sufficient qualified faculty and qualified to deliver the educational program. - Participation in scholarly activities is important for faculty evaluation.	- The national shortage of veterinary faculty creates a highly competitive environment for faculty recruitment, and as a rural institution with a nascent DVM program, Murray State stands to face challenges competing for faculty talent. Murray State is also not currently budgeting for faculty start-up packages, which stands to exacerbate these faculty recruitment issues.
10 Research Programs	- Maintain substantial high-quality research integrated with the professional program.	- Ensuring high-quality research activities and their integration with the professional program requires significant resources and support, including startup packages for research faculty, which peer program leadership estimated at $300k-400k per research faculty FTE. The AVMA COE (accrediting body) recently issued a major deficiency to another distributive model DVM program at a university without high research activity (i.e., not an R1 or R2), illustrating the challenges that universities may face when meeting the AVMA's accreditation standards in the research domain.
11 Outcomes Assessment	- Minimum of 80% NAVLE[1] pass rate by graduates within the first two years.	- Growing competition for DVM students as new CVMs launch and establish CVMs grow their student populations introduce risk that Murray may need to recruit less qualified applicants to fill their classes who may not be prepared to take licensing exams.

Note: 1) The North American Veterinary Licensing Examination (NAVLE), is a requirement for licensure to practice veterinary medicine in all licensing jurisdictions in the US and Canada. Sources: AVMA Accreditation Standards, NAVLE, peer benchmarking interviews

Clinical Placements

Clinical Placements

Y

In a KVMA survey, over 170 veterinarians across KY expressed interest in supporting clinical education for Murray State students, though a distributive clinical education model requires an expansive partner network, and Murray State may need to look out of state to fulfill its needs, particularly for veterinary specialties.

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DVM Distributive Model of Clinical Education Operating Requirements

Murray State's proposed model of clinical education will require an extensive partner network as well as investments in faculty and staff, technology, and payments to clinical partners.

In a **distributive model of veterinary education**, students gain hands-on clinical experience at various off-campus clinical sites rather than at an on-campus teaching hospital.

These clinical sites include private practices, urgent care clinics, emergency clinics, referral hospitals, shelters, zoos, and wildlife rehabilitation centers.

Factors Driving Cost and Complexity in Distributive Models

Breadth of Clinical Partner Network

Peer institutions partner with 130-600 hospitals, clinics, and other facilities across the US for clinical education. Adjusting for Murray State's targeted enrollment, they may need **>200 partners** at steady state and will likely need to engage partners outside the Southeast.

FTEs Required to Run Program

Peer programs employ an average of **five FTEs** to administer their clinical education program, including an associate dean of clinical relations.

Other Costs to Administer Placements

Murray State anticipates needing to pay **$12k** per year per student to clinical partners to educate students, which is materially aligned with peer estimates. New technology systems are also needed to administer clinical schedules.

⚠ While the cost of administering a distributive model of clinical education is lower than a traditional model with a teaching hospital, **the complexity and risk are higher**. Murray State will need to develop an extensive network of partners and invest in faculty and staff to administer the program and ensure that students consistently receive high-quality training.

Source: Peer benchmarking interviews.

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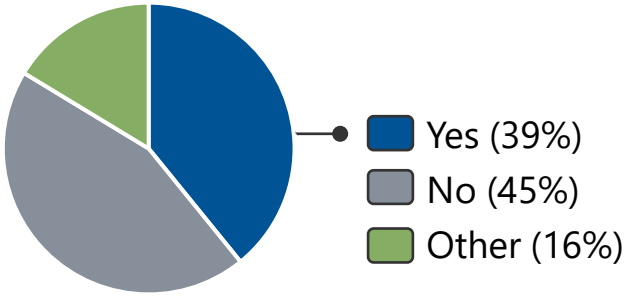
Regional Clinical Capacity

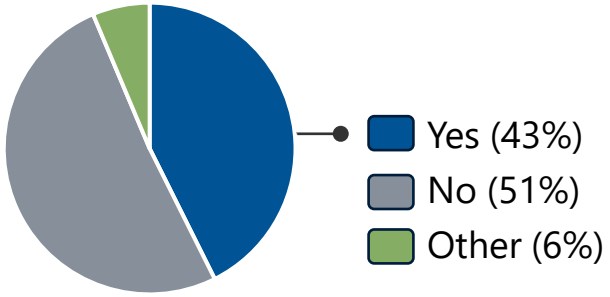
The Kentucky Veterinary Medical Association (KVMA) recently conducted a survey of its members that assessed their capacity for providing clinical education to new veterinary students in a distributive model. Relevant results are summarized across the next two slides.

KVMA Membership Survey: Interest in Clinical Site Service and Quality Education Capacity

If your practice met the…requirements to be a clinical education site for a new veterinary school in KY, would you be interested in participating?



Given your current workload, do you feel you could provide a quality educational experience [to students]…during their clinical rotations?



n=449 out of an estimated 1,600 vets licensed in Kentucky

- **188** respondents indicated capacity to provide clinical education, though only **178** respondents indicated an interest in providing clinical education to students in a distributive model. Interest in hosting students does not guarantee that clinics will meet AVMA Council of Education requirements to serve as a clinical education site.
- Projecting the survey results across the broader population of veterinarians in KY suggests that Murray State will see robust interest in partnership across the Commonwealth, which will help them meet clinical education needs, which could require >200 partners.
- KVMA data does not specify what types of clinical education each respondent clinician can provide. Peer interviews suggest that Murray State may need to look outside the Commonwealth to identify partners for some required clinical courses where clinical partner capacity is limited.

Source: KVMA Membership Survey regarding a proposed KY Veterinary School.

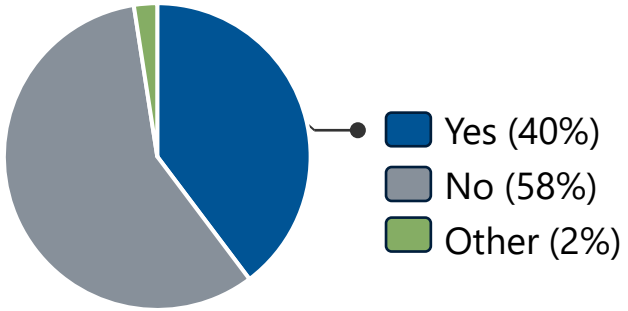
MURRAY STATE | COLLEGE OF VETERINARY MEDICINE

Regional Clinical Capacity, Continued

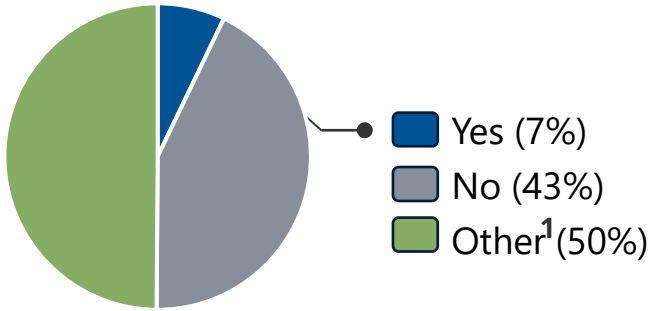
The Kentucky Veterinary Medical Association recently conducted a survey of its members that assessed their capacity for providing clinical education to new veterinary students in a distributive model. Relevant results are summarized below and on the prior slide.

KVMA Membership Survey: Prior Experience and Perceptions of Distributive Model Schools

Have you directly participated as a clinical site for distributive model schools?



If you have participated as a clinical site…, do you feel a distributive model school provides the same level of education or better than…students currently receive through [the] contract spaces?



n=449 out of an estimated 1,600 vets licensed in Kentucky

- 175 respondents indicated that they have directly participated in the clinical education of veterinary medical students in a distributive model of clinical education. Of those, **only 7%, or 32 respondents**, believe that the distributive model of clinical education provides the same (or better) quality of clinical education as a traditional model (in this survey, the education at Auburn and Tuskegee in particular).
- While some survey respondents may be biased as graduates of Auburn or Tuskegee (this was not controlled for in the survey**), the quality concerns expressed by many survey respondents poses a risk to Murray State's ability to secure clinical placements**. They will need to change perceptions among the KY veterinarian community to effectively secure and maintain clinical sites for their students.

Note: 1) "Other" captures the responses of veterinarians that have not participated as a clinical site for students in a distributive model. Source: KVMA Membership Survey regarding a proposed KY Veterinary School.

WKU | One or More PhD Programs Leading to an R2 “High Research Activity” Designation

Financial Health Assessment

Overall Feasibility Assessment

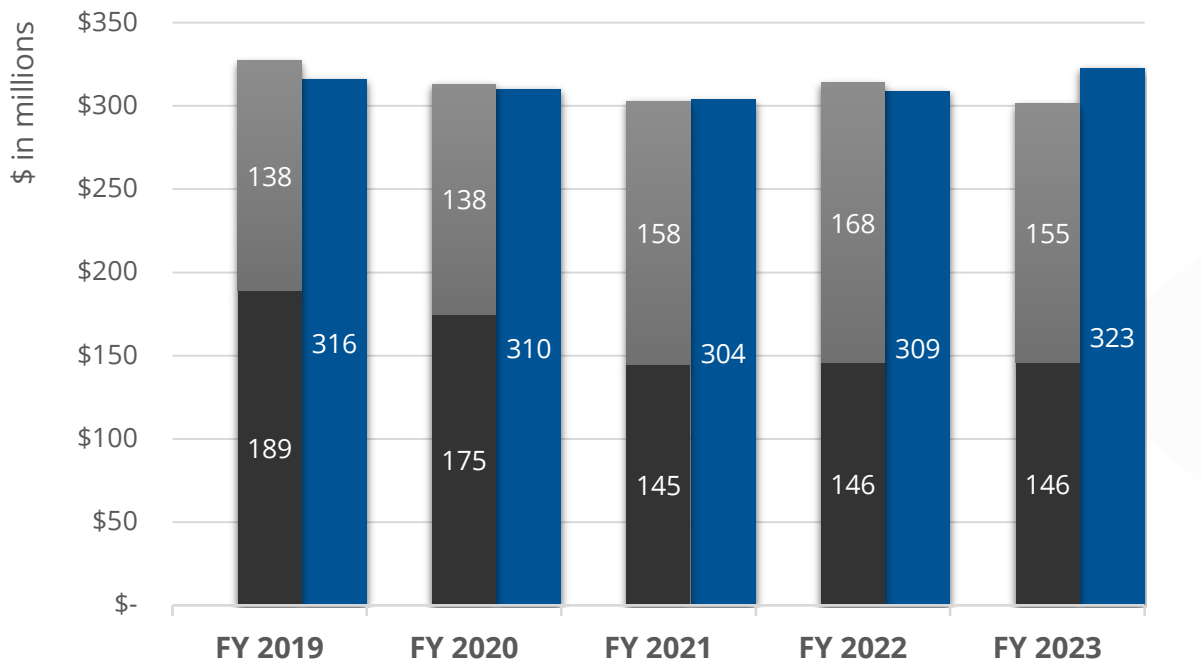
Financial Health	Y	**R2**: Risks from declining operating revenues and rising expenses as identified in WKU's financial health assessment raise some concerns over the institution's long-term ability to fund the pursuit of new initiatives.

WKU | PURSUIT OF R2 "HIGH RESEARCH ACTIVITY" DESIGNATION

Financial Health Assessment | Net Position

Since Fiscal Year (FY) 21, WKU's expenses have accelerated above pre-pandemic levels, while operating revenues remain depressed and federal COVID funds have diminished, leading to a -$22M margin in FY23 (from audited financial statements, adjusted to exclude Pension/OPEB Expense Adjustments).

WKU Actual Ending Results (FY 2019 – FY 2023)



Key Takeaways

Expenses (excl. pension/OPEB adjustment) have grown 2.2% in the last five years while revenues have declined by 8.2%, leading to deficits in FY21 and FY23. Recent expense growth was primarily driven by increases in instruction, student services, and depreciation and amortization expenses.

Net Tuition and Fees, WKU's largest revenue source, has declined significantly in recent years from $127M in FY19 to $92M in FY23, driven by a 21.5% decline in enrollment since AY2013-14. In concert with slowing tuition revenues, Auxiliaries generated $14M in FY 2023, down from $22M in FY 2019.

WKU's non-operating revenues were supplemented by federal COVID relief funds from FY20 to FY23, but federal relief aid **dropped significantly in FY23, from $33M in FY21 and $24M in FY22 to only $3M in FY23,** contributing to a net loss of $13M in nonoperating revenues from FY22 to FY 23**.**

While the chart on the left adjusts for OPEB/pension, a 2022 Moody's report highlights "**the university's significant and growing net pension liability continues to weigh heavily** on WKU's total leverage while also adding to its inflexible costs."

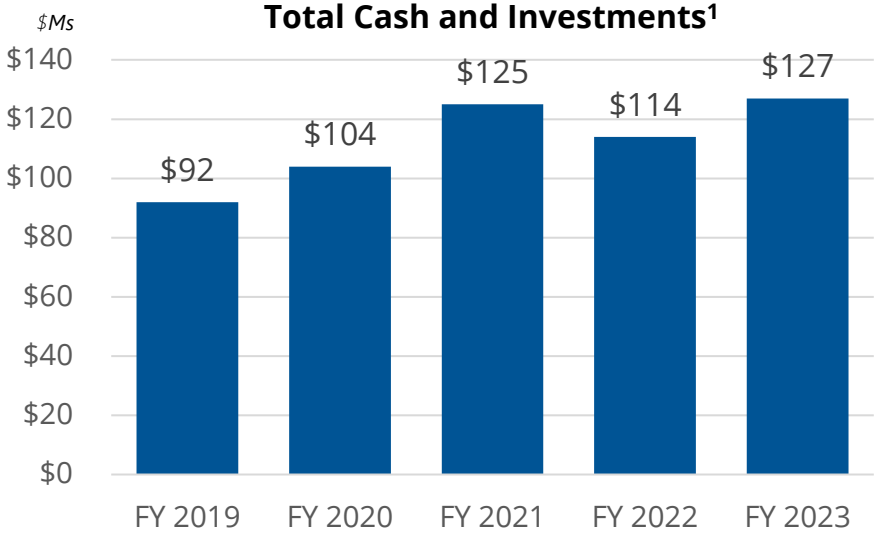
WKU has experienced varied net operating results in recent years; weakening operating performance, fueled by declining net tuition revenues and accelerating expenses, pose risks to the institution's long-term financial stability. Expense management and revenue diversification can help address these financial pressures, which are also affecting other comprehensive universities in Kentucky.

Notes: 1) Adjusted to not include Pension Expense Adjustments and Other Postemployment Benefits (OPEB) Expense Adjustments; 2) Includes Net Nonoperating Revenues and State Capital Appropriations. Sources: CPE Funding Model Outcomes data; Moody's Rating Report (Dec 2022); WKU Audited Financial Statements.

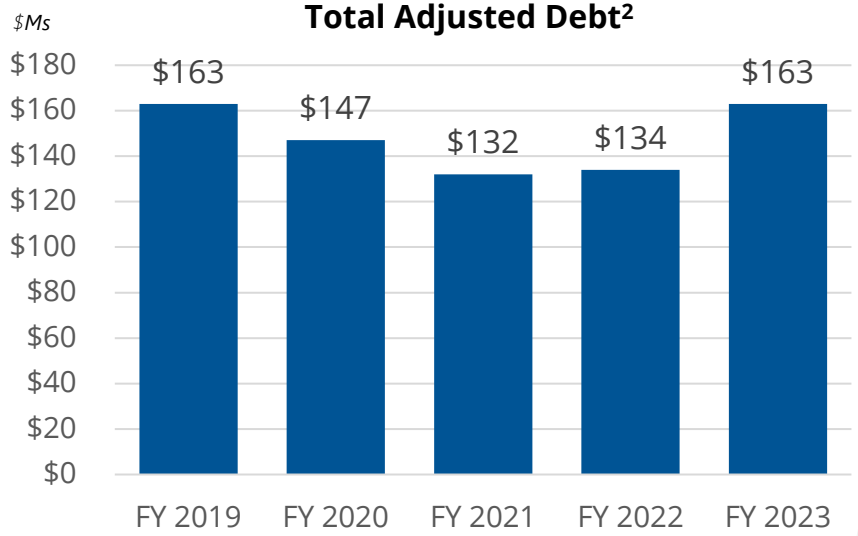
Financial Health Assessment | Balance Sheet Summary

WKU's balance sheet demonstrates some risks due to elevated leverage, with Total Cash and Investments (C&I) not being of equal magnitude to Total Adjusted Debt at 0.8x.

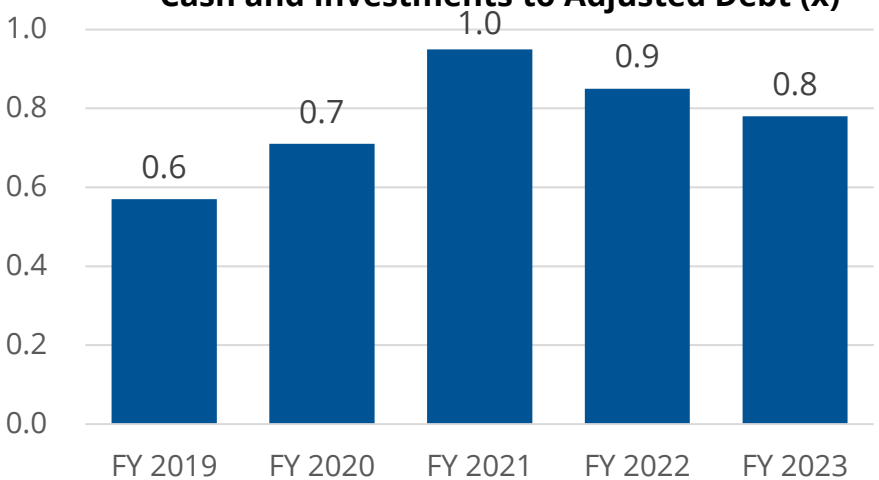
Total Cash and Investments[1]



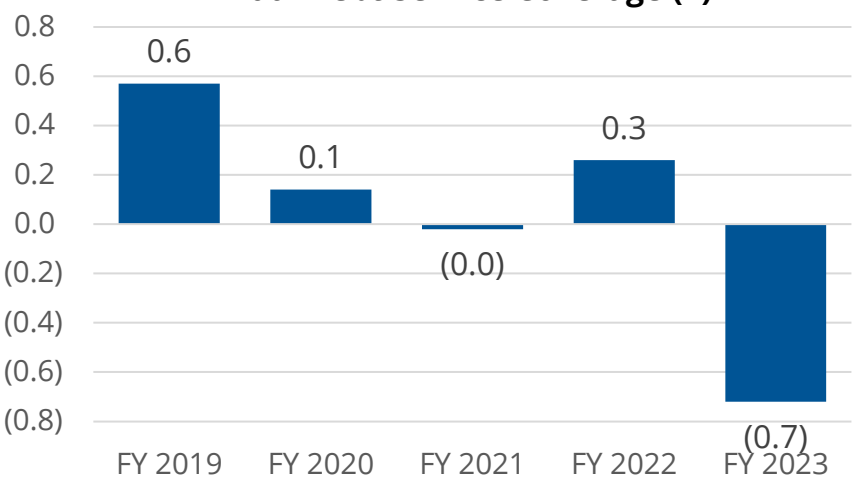
Total Adjusted Debt[2]



Cash and Investments to Adjusted Debt (x)



Annual Debt Service Coverage (x)[3]



Key Takeaways

Growing Cash and Investments
Cash and Investments increased 38% from FY 2019 to FY 2023, demonstrating substantial growth in recent years. WKU's foundations also provide a strong pool of liquidity.

Steady Total Adjusted Debt
Total Adjusted Debt decreased by 25% from FY 2019 to FY 2021 but has since risen back to pre-pandemic numbers, driven by $50M of bonds issued in FY 2023.

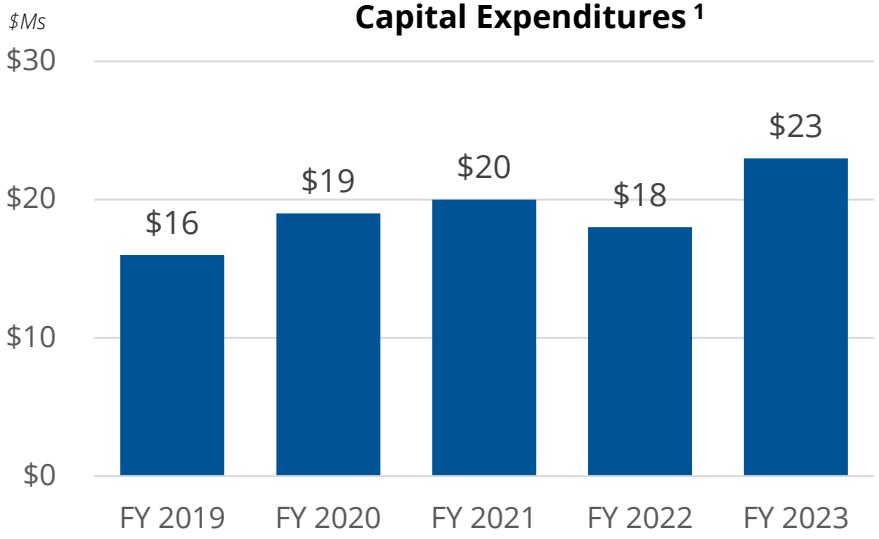
Elevated Leverage Position
An increasing debt load with C&I at 0.8x debt and annual debt service coverage at -0.7x may challenge the institution's future ability to fund strategic initiatives and maintain long-term financial stability.

Notes: 1) Reflects Cash and Cash Equivalents, Restricted Cash and Cash Equivalents, Short-Team Investments, Noncurrent Investments; 2) Reflects Pledges to the City, General Receipts Bonds, Leases, Subscriptions, Other Long-Term Obligations; 3) Reflects Principal Paid on Capital Debt and Leases, Interest Paid on Capital Debt and Leases. Source: WKU Audited Financial Statements.

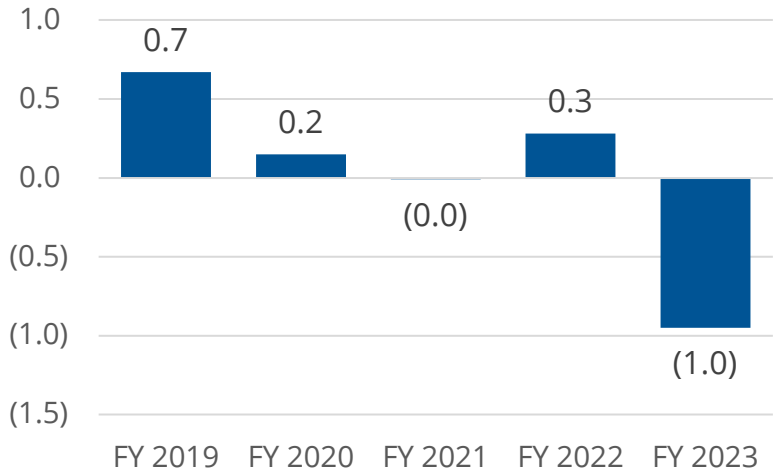
Financial Health Assessment | Capital Expenditures

Capital expenditures have increased from $18M in FY 2022 to $23M in FY 2023, driven by an increase in strategic investments and state support.

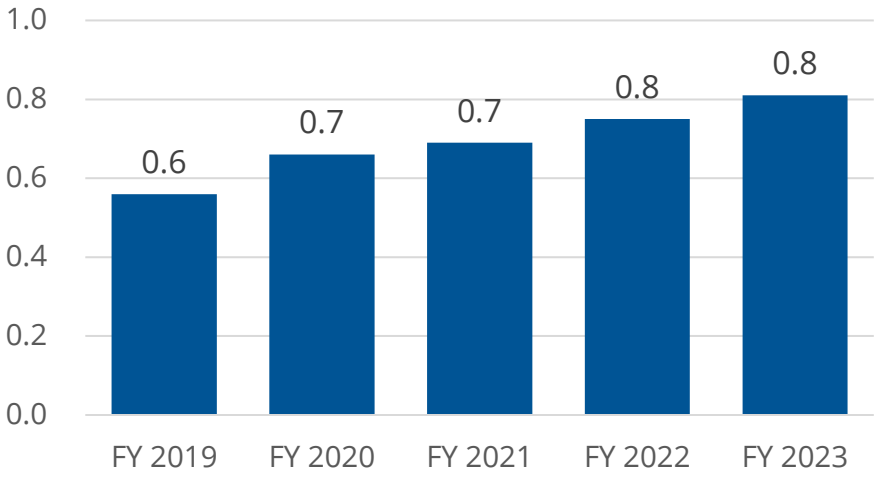
Capital Expenditures [1]



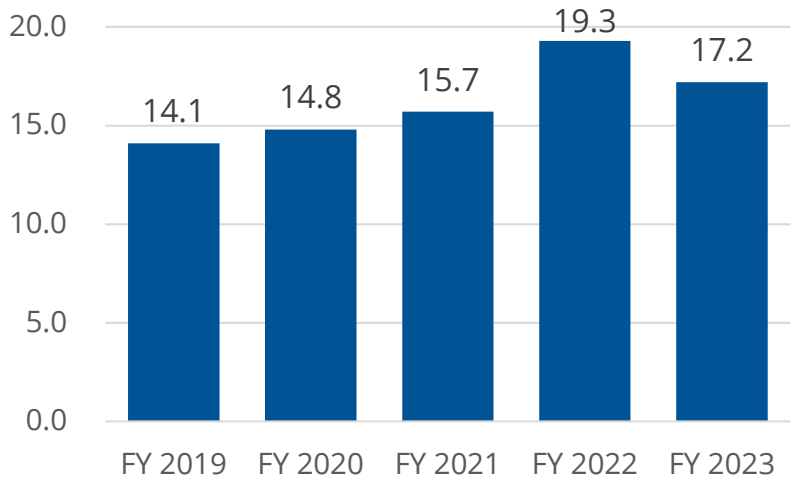
Change in Adjusted Net Position[2] to CapEx (x)



Capital Spending Ratio (x)



Average Age of Plant (Years)



Key Takeaways

Growth in Capital Spending
Capital spending has been increasing since FY 2019, rising to $23M in FY 2023. The university's increase in strategic capital investments, aimed at new construction and campus renovations, have been bolstered by recent state capital support for new projects.

Depreciation Outpacing CapEx
Despite increased investment, capital expenditures have not yet caught up to depreciation, evidenced by consistent <1.0 capital spending ratios.

Other Capital Expenditures
Western Kentucky University Foundation, Inc., spent an additional $1M on capital expenditures in FY 2023, supplementing the university's own expenditures.

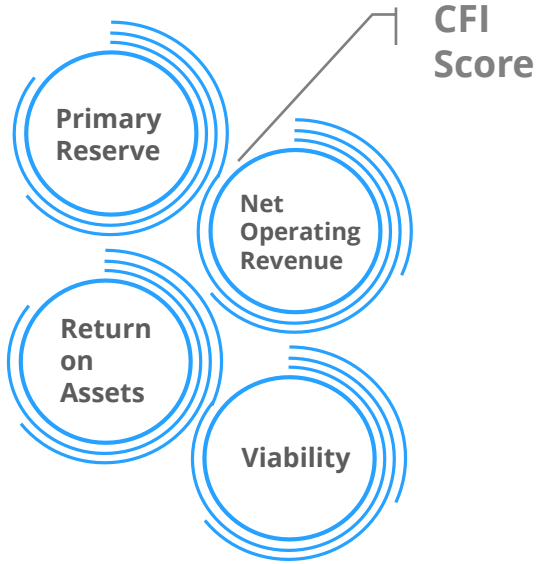
Notes: 1) Reflects Purchase of Capital Assets; 2) Adjusted to not include Pension/OPEB Expense Adjustments. Source: WKU Audited Financial Statements.

Financial Health Assessment | Composite Financial Index (CFI)

WKU's Composite Financial Index (CFI) score of 1.18 in 2023 provides a point-in-time indicator of financial health and a "need to re-engineer" the institution.

The four ratios are **primary reserve, net operating revenue , return on assets, and viability**. These ratios **gauge the fundamental elements of the financial health** of an institution. The composite score reflects the overall relative financial health along a scale from **negative 4.0 to positive 10.0** for higher education institutions. A score greater than 3 is considered relatively financially healthy.

CFI Components



Key Ratios

Primary Reserve Ratio

$$\frac{\text{expendable net assets}}{\text{total expenses}}$$

Net Operating Revenue Ratio

$$\frac{\text{net operating income}}{\text{total unrestricted operating revenues}}$$

Return on Assets Ratio

$$\frac{\text{change in net assets}}{\text{total net assets}}$$

Viability Ratio

$$\frac{\text{expendable net assets}}{\text{plant-related debt}}$$

WKU CFI Score[1,2]	Ratio	CFI Score
Primary Reserve	0.44x	1.15
Net Operating Revenue	-6%	-0.40
Return on Assets	-1%	-0.10
Viability	0.63x	0.52
Total	---	1.18

Notes: 1) Adjusted to not include Pension/OPEB Expense Adjustments; 2) Ratio calculations include Component Unit (CU) data. Sources: WKU Audited Financial Statements; Higher Learning Commission CFI Worksheet; TIAA The Financial Resilience of Independent Colleges and Universities (2017).

Student Success Assessment

Overall Feasibility Assessment

Student Success

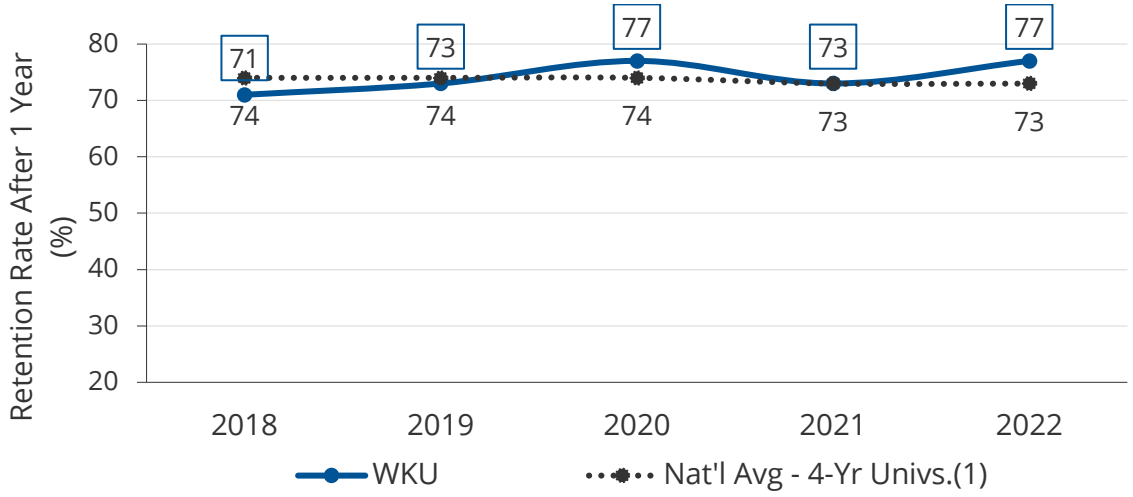
G

R2: WKU's graduation and retention rates rank above the average for comprehensive four-year institutions in KY. In 2022, WKU's first-year retention rate was 77% and six-year graduation rate was 54%.

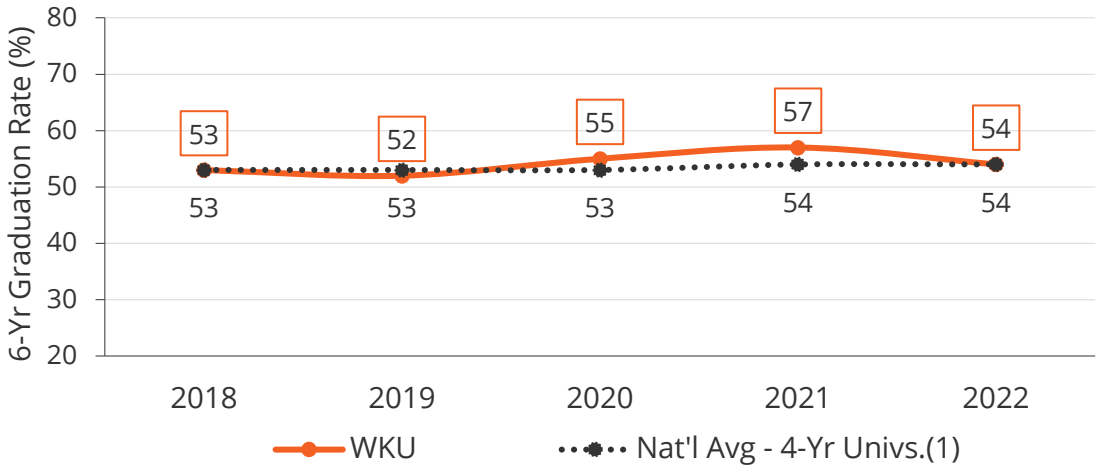
Current State Performance on Key Student Success Metrics

WKU's undergraduate retention rates and graduation rates have remained in line with, or above, peer averages in recent years.

WKU First-Year Retention Rate (First-Time, Full-Time Students)



WKU 6-Year Graduation Rate (First-Time, Full-Time Students)[1]



Retention rates at a five-year high…

- First-to-second year retention rates for first-time, full-time first-year students experienced an overall increase of six percentage points from Fall 2018 (71%) to Fall 2022 (77%).
- First-year retention rates fell below the national average in just one of the past five years. In Fall 2022, WKU's first-year retention reached 77%, exceeding the national average by four percentage points and representing a return to pre-pandemic highs.

…with graduation rates above peer averages but falling.

- The share of students receiving a bachelor's degree or equivalent within six years at WKU remained closely aligned with the national average but fell three percentage points from 57% in 2021 to 54% in 2022.
- WKU's graduation rates ranked the highest among Kentucky comprehensive universities in Fall 2020 and Fall 2021.

Note: 1) National averages include all public and private not-for-profit four-year colleges and universities as reported in IPEDS. Source: IPEDS Data Dashboard.

WKU | PURSUIT OF R2 "HIGH RESEARCH ACTIVITY" DESIGNATION

Current State Performance on the Comprehensive Funding Model

WKU performed worse than the KY comprehensive average on five of the KPIs incentivized by the performance funding model.

CPE utilizes a performance-based funding model that aligns funding with institutional performance on desired state policy goals. After each institution receives their "funding floor", the remaining resources are distributed based on the funding formula:

35% *based on student success metrics* **35%** *based on course completions* **30%** *based on operational support.*[1]

From 2013-14 to 2022-23, WKU performed better than or equivalent to other KY public comprehensive institutions on **four out of nine KPIs:**

- Total Bachelor's Produced
- STEM+H[2] Bachelor's Produced
- Low Income Bachelor's Produced
- URM[3] Bachelor's Produced
- Progression at 30 Hours
- Progression at 60 Hours
- Progression at 90 Hours
- Student Credit Hours Earned
- FTE[4] Student Enrollment

- Three out of five of the underperforming metrics were within three percentage points of the KY comprehensives average.
- WKU has the largest student body among KY public comprehensives universities, so **their performance is less sensitive to change than other institutions.**

Key

- Performed better than or equivalent to KY comps average
- Performed worse than KY comps average

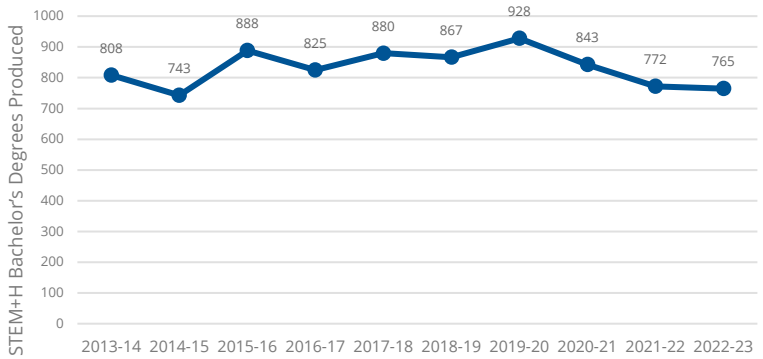
Notes: 1) Funding proportions were amended to 40% for student success metrics and 30% for course completions for the 2024-25 funding distribution; 2) Science, Technology, Engineering, Math, and Health Sciences (STEM+H); 3) Underrepresented Minority (URM); 4) Full-Time Equivalent (FTE). Sources: 13 KAR 2:120E; Performance Funding - Ky. Council on Postsecondary Education; KRS 164.092; Workbook: Kentucky Postsecondary Education Interactive Data Dashboard; Funding Model Data provided by CPE.

Current State Performance on the Comprehensive Funding Model

WKU has shown notable growth in URM bachelor's produced across the last decade, though its growth in STEM+H Bachelor's and Low-Income Bachelor's lags the other regional comprehensives in Kentucky.

Data Trends

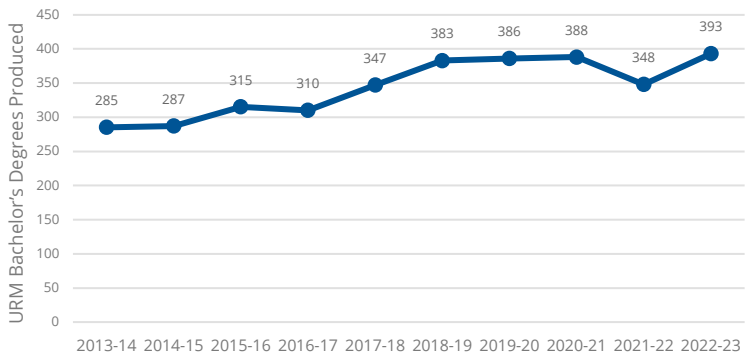
STEM+H Bachelor's Produced



5% WKU | **7%** KY Comps[2]

number of STEM+H Bachelor's produced from 2013-14 to 2022-23

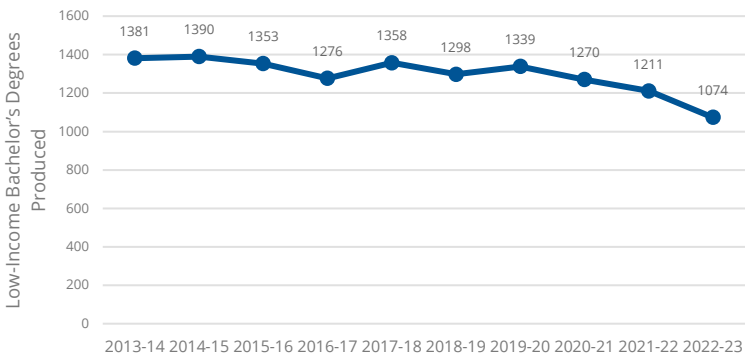
Underrepresented Minority Student (URM) Bachelor's Produced[1]



38% WKU | **23%** KY Comps

number of URM Bachelor's produced from 2013-14 to 2022-23

Low-Income Bachelor's Produced



22% WKU | **15%** KY Comps

number of Low-Income Bachelor's produced from 2013-14 to 2022-23

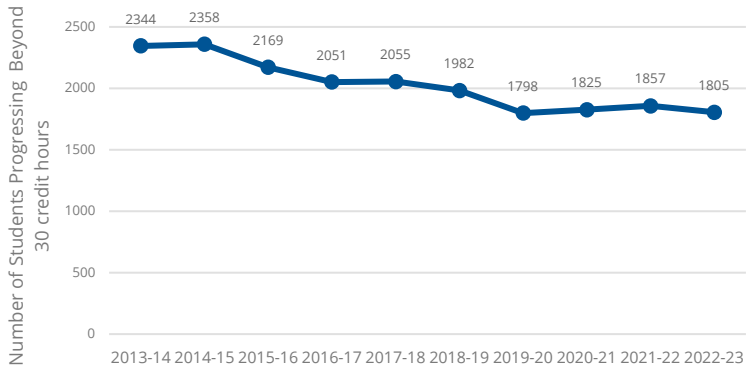
Notes: 1) The URM Bachelor's Degrees metric has been amended to "underrepresented students", defined as "first generation college students", for the 2024-25 funding distribution; 2) KY Comps refers to all six Kentucky public comprehensive universities: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University. Source: Funding Model Outcomes provided by CPE.

Current State Performance on the Comprehensive Funding Model

Although WKU's progression metrics have faced long-term declines, they've seen slight increases in recent years, and they've outperformed other regional comprehensives in progression @ 60 and 90 hours.

Data Trends

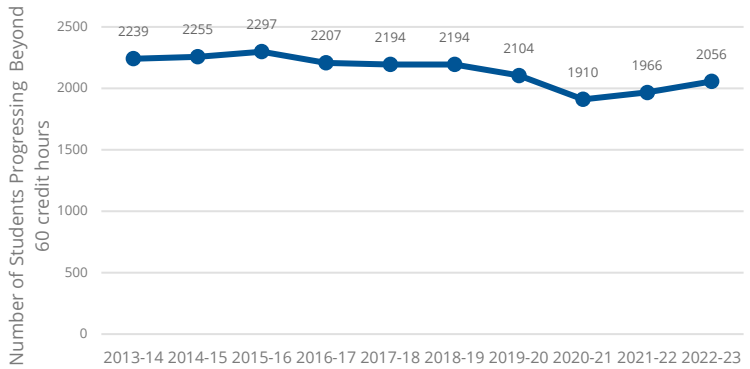
Progression @ 30 hours



23% WKU | **20%** KY Comps[1]

number of undergraduate students @ 30 hours from 2013-14 to 2022-23

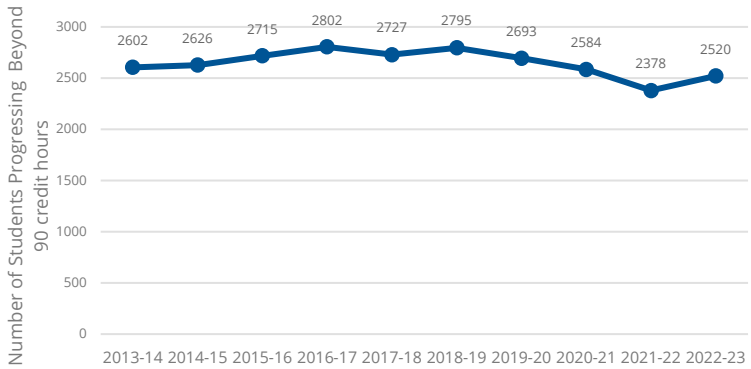
Progression @ 60 hours



8% WKU | **15%** KY Comps

number of undergraduate students @ 60 hours produced from 2013-14 to 2022-23

Progression @ 90 hours



3% WKU | **11%** KY Comps

number of undergraduate students @ 90 hours from 2013-14 to 2022-23

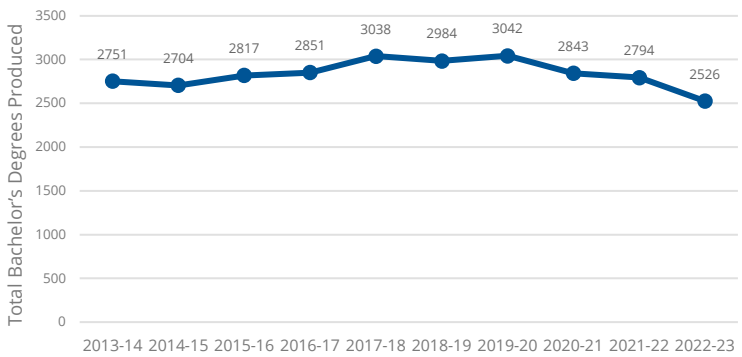
Note: 1) KY Comps refers to all six Kentucky public comprehensive universities: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University. Source: Funding Model Outcomes provided by CPE.

Current Performance on the Comprehensive Funding Model

WKU has experienced downward trends in growth in bachelor's degree production, student credit hours earned, and FTE student enrollment, in line with broader trends across the KY comprehensives.

Data Trends

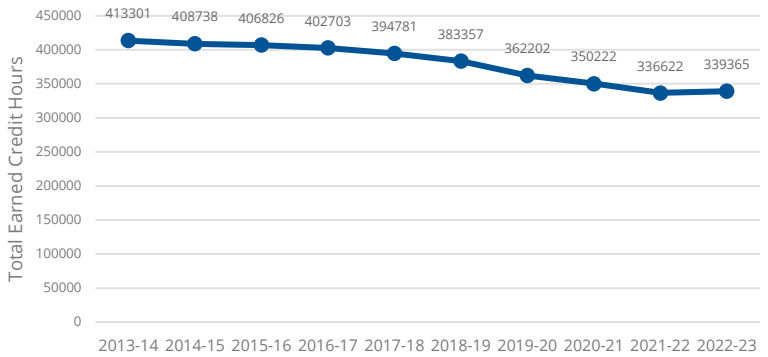
Total Bachelor's Produced



8% WKU | **8%** KY Comps[1]

number of Total Bachelor's produced from 2013-14 to 2022-23

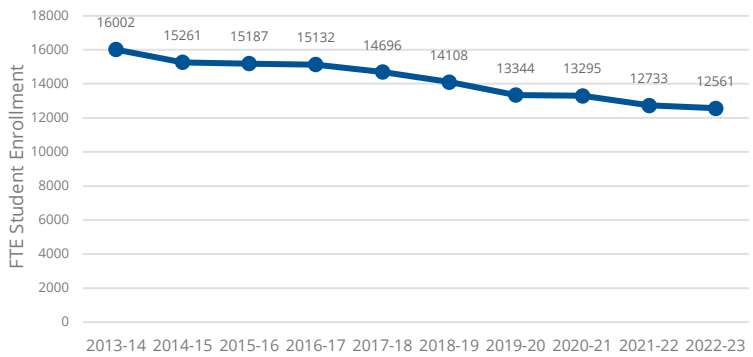
Student Credit Hours Earned



18% WKU | **16%** KY Comps

number of Student Credit Hours earned from 2013-14 to 2022-23

FTE Student Enrollment



22% WKU | **21%** KY Comps

number of FTE Student Enrollment from 2013-14 to 2022-23

Note: 1) KY Comps refers to all six Kentucky public comprehensive universities: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University. Source: Funding Model Outcomes provided by CPE.

Research Infrastructure Assessment

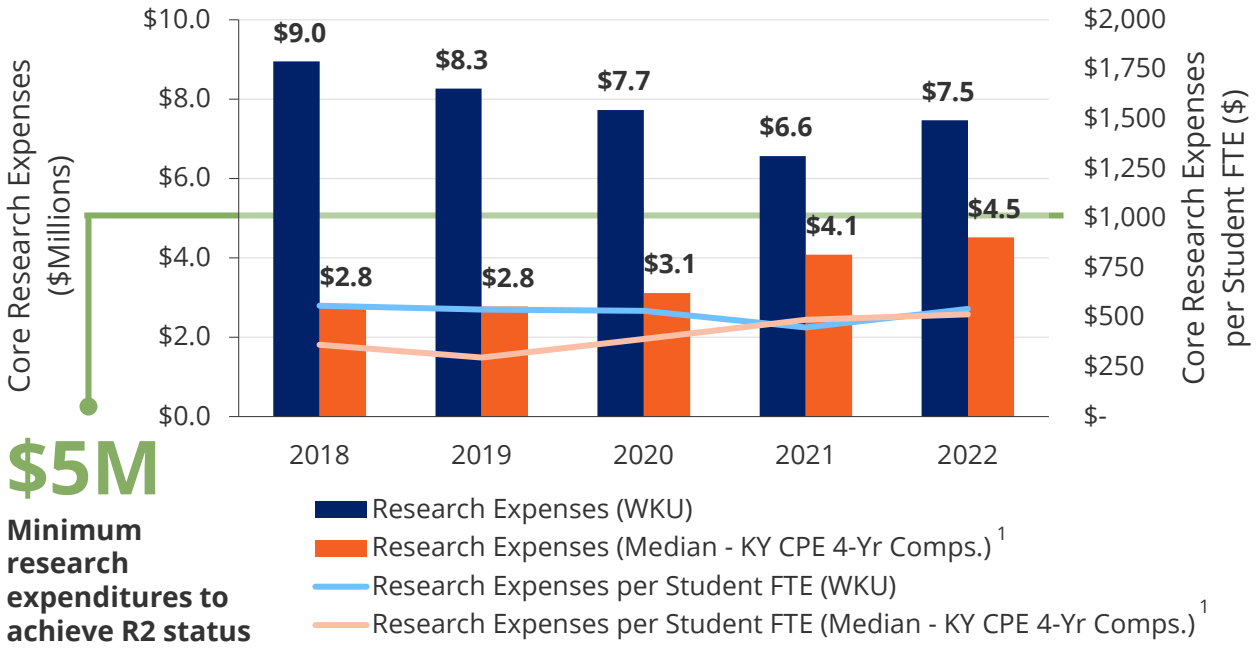
Overall Feasibility Assessment

Research Infrastructure	G	**R2**: WKU has taken several intentional steps to lay the foundation for increased research, including expanded central research staffing and trainings, budget allocations to provide research seed funding, and refining faculty workload policies.

Current State Research Infrastructure

WKU has taken several steps to lay the groundwork for increased institutional research, including central policies, supports, and funds. While WKU's total research expenses have declined since 2018, research spending as a share of total expenses has remained steady.

WKU Core Research Expenses (2018-2022)



After declining to just under $6.6M in 2021, WKU's core research expenditures increased $0.9M to nearly $7.5M dollars in 2022. While 2022 totals represent a net decline of nearly $1.5M from 2018 (-4.4% CAGR), when considered proportionally to overall core expenses, research expenses have remained relatively steady across this time period, representing approximately between 2.9% and 3.2% of core expenses. WKU's core research expenses per student FTE declined slightly from 2018 to 2022 (-0.7% CAGR).

Additional Research Infrastructure Feasibility Considerations

Central Research Office Investments and Trainings

WKU has grown its Office of Research and Creative Activity in recent years, with eight FTE at present and plans to add five more positions in the next three to five years. The Office of Sponsored Research hosts trainings for faculty and staff on pre-/post-award planning and management.

Policy-Based Approach to Faculty Workloads and Research Expectations

WKU has implemented a new Flexible Workload and Compensation policy, as well as individual college and school-specific policies, to encourage an equitable approach to balancing teaching, research, and service expectations in a manner that promotes the institution's research strategy while continuing to prioritize students' educational needs.

Internal Seed Funding to Jump-Start Campus Research

WKU offers five internal funding pools designed to launch faculty and student research endeavors, with annual awards ranging from $500 to $50,000.

Note: 1) KY Comps refers to all six Kentucky public comprehensive universities: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University. Sources: IPEDS Data Center; WKU stakeholder interviews and materials.

Cost-Benefit Analysis

Overall Feasibility Assessment

Cost-Benefit Analysis	Y	**Data Sciences PhD**: Like most PhD programs, WKU's PhD in Data Sciences is not expected to generate net surplus, but, the program will require relatively limited institutional investment to support operational expenses given the small program size and existing infrastructure.

Assumptions Driving Financial Model

WKU stakeholder discussions, program proposal and related materials, and peer/market research inform the drivers behind the financial model.

OTHER EXPENSES REVENUES

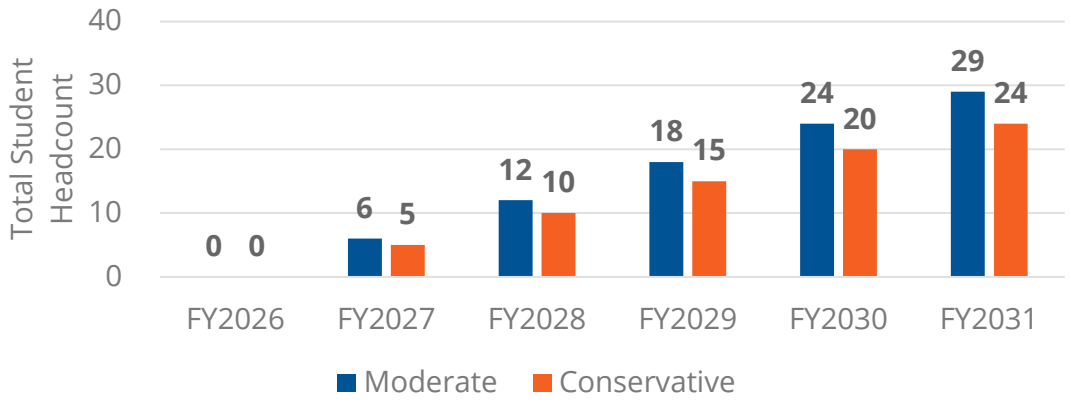
Line Item	Forecast Approach	Moderate Drivers	Conservative Drivers
Enrollment	WKU Proposal Materials, Market Research and Peer Comparisons	Annual enrollment totals supplied by WKU and evaluated against peer conferral trends for similar PhD programs. WKU estimated 20% program attrition rate. Model assumes all attrition will occur between a student's 4th and 5th year in the program.	Annual enrollment estimated to be 25% lower than moderate model. Program attrition rate adjusted up to 35%. All other assumptions same as moderate model.
Tuition & Fees	WKU Proposal Materials	Annual tuition and fees, including application fees, based on WKU AY2024-25 graduate rates, with annual increase projected at 2.5%, based on ten-year historical tuition increases at WKU. Per credit charges based on a 90-credit program with 25 credits accumulated in students' 1st and 2nd years, 19 credits in students' 3rd and 4th years, and 2 credits in students' 5th year in program.	Same assumptions as moderate model.
Graduate Fellowships	WKU Proposal Materials	Model adopts assumption that students will receive full tuition waiver/fellowships for full length of program, in accordance with WKU proposal and related materials.	Same assumptions as moderate model.
Faculty and Staff Salary and Benefits	WKU Proposal Materials, WKU Historical Trends, Market Research and Peer Comparisons	Faculty and staff headcounts reflect WKU proposal. WKU indicated faculty will be hired in Years 3 and 4 with existing faculty sufficient to operate the program until that time. Model assumes staff will be hired in Year 0. Starting salaries for faculty and staff supplied by WKU, as well as forecasted 2.5% annual salary expense increase. Administrative stipend annual totals supplied by WKU. Employee Benefits are projected at the following rates based on existing WKU rates: Administration: 24.2%, Faculty: 20.4%, Staff: 47.4%.	Same headcounts, benefit rates, and initial salary rates as moderate model, but annual increase for faculty and staff salary expenses estimated one percentage point higher (3.5%).
Faculty Start-up Packages	WKU Proposal Materials	WKU estimated faculty start-up funds as ranging from $50,000 to $150,000 per faculty. Model assumes start-up funds will fall in the middle of this range ($100,000 per faculty). Model assumes this full amount will be billed 100% to the program/department, with any amount in excess of the listed rate to be absorbed by the relevant college or the Office of Sponsored Research. Model assumes that 100% of start up funds are budgeted/expensed in the year that faculty are hired in order to get a short-term view of financial outlays, but recognize that, in reality, purchases may carry forward for a few years.	Same assumptions as moderate model, but start-up fund costs projected to be 15% higher.
Graduate Assistantships	WKU Proposal Materials	Employs rate used in WKU proposal and related materials ($25,000 per student per year).	Same assumptions as moderate model.
All Other Operating Expenses	WKU Proposal Materials, National Trends	Incorporates estimates and timeline for expenses as outlined in WKU proposal and related materials with minimal adjustments. Detailed breakdown of these assumptions is included in the Appendix. Model incorporates annual increase for all other operating expenses equal to 2.7%, based on the average annual inflation rates from 2014-2023.	Same assumptions as moderate model, but annual increase equal to 4.0% (avg annual inflation 2019-23).
Internal Reallocations	WKU Proposal Materials, WKU Historical Trends, External Funding Analysis	Model follows approach used in WKU proposal and related materials in which budget allocations are equal to remaining program expenses after a) any net revenue and b) internal reallocations from the Strategic Initiative Fund ($200,000 maximum annually).	Same assumptions as moderate model.

Note: 1) Faculty-generated competitive grant funding is not included in the projections above as the assumption is that new grant funding will largely be used to fund new research rather than PhD program operations.

Enrollment and Conferral Assumptions

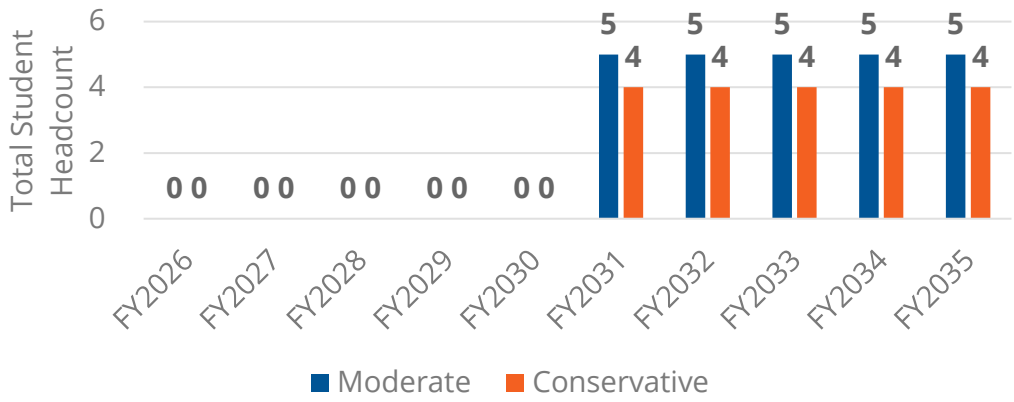
Limiting new student cohorts to a maximum of six students helps to limit the largest contributor to program expenses – graduate assistantships, which total $25,000 per student, per year.

Projected Enrollment, PhD in Data Sciences, FY26–FY31[1,2]



Assuming moderate enrollment, the first class begins in FY27 (AY2026-27) at six students with total enrollment increasing at a steady state in following years to around 29 total students beginning in FY2031. The conservative model follows this same cadence but instead beginning at five students and normalizing enrollment at 24 total students beginning in FY2031.

Projected Conferrals, PhD in Data Sciences, FY26–FY35



Conferrals are likely to begin in FY31 (AY2030-31) and will continue at a rate of approximately five students per year under the moderate model, four under the conservative model. The moderate and conservative models assume program attrition rates of 20% and 35%, respectively.[2]

One of the conditions of achieving R2 status is *conferring* at least 20 research doctoral degrees. While this financial model focuses on a single program (PhD in Data Sciences PhD, WKU intends to launch three to four additional PhD programs in order to generate sufficient conferrals to achieve R2 status.

Notes: 1) Moderate totals based on WKU proposal, with conservative estimates developed using assumptions outlined previously; 2) Enrollment and conferral totals are rounded up in instances of partial students due to program attrition or adjustments between conservative and moderate models. Sources: Carnegie Classification: 2025 Basic Classification FAQs; WKU proposal and follow up materials.

WKU | PURSUIT OF R2 "HIGH RESEARCH ACTIVITY" DESIGNATION

Financial Model | Moderate Projection

The operating results[1] in the moderate scenario represents the most likely scenario with many estimates provided directly by WKU.

Budget - Moderate Scenario	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Enrollment	-	6	12	18	24	29
Revenues:						
Tuition & Fees	-	96,069	196,942	278,677	364,377	380,902
Fellowships (Graduate Tuition Waivers)	-	(95,659)	(196,102)	(277,386)	(362,612)	(378,716)
Net Tuition Revenue	$ -	$ 410	$ 840	$ 1,291	$ 1,765	$ 2,186
Total Operating Revenues	$ -	$ 410	$ 840	$ 1,291	$ 1,765	$ 2,186
Operating Expenses:						
Personnel						
Faculty Salaries and Stipends	-	-	-	75,000	151,875	153,750
Staff Salaries	33,000	33,825	34,671	35,537	36,426	37,336
Employee Benefits	19,276	19,667	20,068	44,495	68,294	69,296
Start-up Packages	-	-	-	100,000	100,000	-
Graduate Assistants	-	150,000	300,000	450,000	600,000	725,000
Other OpEx						
Marketing, Program Development and Curriculum Design	35,000	-	-	-	-	-
Libraries	5,000	5,135	5,274	5,416	5,562	5,712
Travel	1,000	7,189	13,711	21,664	30,036	36,560
Equipment	30,000	10,270	10,547	10,832	11,125	11,425
Other Operating Expenses (e.g., software, supplies)	10,000	10,270	10,547	10,832	11,125	11,425
Facilities Expense	-	-	-	-	-	-
Total Operating Expense	$ 133,276	$ 236,356	$ 394,818	$ 753,776	$ 1,014,442	$ 1,050,505
Net Surplus/(Deficit) - Before Internal Reallocations	$ (133,276)	$ (235,946)	$ (393,978)	$ (752,485)	$ (1,012,677)	$ (1,048,319)
Internal Reallocations						
Strategic Initiative Fund	133,276	200,000	200,000	200,000	200,000	200,000
Budget Reallocations	-	35,946	193,978	552,485	812,677	848,319
Total Internal Reallocation	133,276	235,946	393,978	752,485	1,012,677	1,048,319
Net Surplus/(Deficit) - After Internal Reallocations	$ -	$ -	$ -	$ -	$ -	$ -

Key Takeaways

- **Revenue Primarily Limited to Potential for Faculty Grant Funding:** Like most PhD programs, the PhD in Data Sciences is unlikely to generate significant tuition revenue, as students will receive a graduate fellowship sufficient to cover all tuition and fees, save application fees. As such, revenue generation is uncertain and would depend upon generation of new research grants by program faculty. WKU estimates that new competitive grant funding generated could be $75,000 in Year 3 and $150,000 in Years 4 and 5.[2]
- **Largest Expenses Due to Graduate Assistantships, Faculty Salary/Benefits:** WKU intends to leverage existing faculty across multiple departments in early years, curbing net new personnel investments, but two faculty hires across Years 3 and 4 will result in an additional $200k+ in annual faculty salary and benefits costs. Graduate assistantships, the largest single expense driver, will range from $150k to $725k as enrollment grows.
- **Although the program is net negative before internal reallocations (~$1M in FY2031), the total annual investment required from internal budget allocations, including the Strategic Initiative Fund, is relatively small.**

Notes: 1) Assumptions detailed earlier in this section of the report on Slide 127. 2) Faculty-generated competitive grant funding is not included in the projections above as the assumption is that new grant funding will largely be used to fund new research rather than PhD program operations. Sources: IPEDS Data Center; WKU Proposal and Follow-Up Materials; WKU Tuition and Fees; US Bureau of Labor Statistics Consumer Price Index for All Urban Consumers.

Financial Model | Conservative Projection

The operating results[1] in the conservative projection represents the financial impact of a "worst case" scenario.

Budget - Conservative Scenario	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Enrollment	-	5	10	15	20	24
Revenues:						
Tuition & Fees	-	80,058	164,118	232,231	303,647	317,172
Fellowships (Graduate Tuition Waivers)	-	(79,716)	(163,418)	(231,155)	(302,177)	(315,362)
Net Tuition Revenue	$ -	$ 341	$ 700	$ 1,076	$ 1,471	$ 1,809
Total Operating Revenues	$ -	$ 341	$ 700	$ 1,076	$ 1,471	$ 1,809
Operating Expenses:						
Personnel						
Faculty Salaries and Stipends	-	-	-	75,000	152,625	155,250
Staff Salaries	33,000	34,155	35,350	36,588	37,868	39,194
Employee Benefits	19,276	19,824	20,391	44,993	69,206	70,633
Start-up Packages	-	-	-	115,000	115,000	-
Graduate Assistants	-	125,000	250,000	375,000	500,000	600,000
Other OpEx						
Marketing, Program Development and Curriculum Design	35,000	-	-	-	-	-
Libraries	5,000	5,200	5,408	5,624	5,849	6,083
Travel	1,000	6,240	11,898	19,123	26,907	32,850
Equipment	30,000	10,400	10,816	11,249	11,699	12,167
Other Operating Expenses (e.g., software, supplies)	10,000	10,400	10,816	11,249	11,699	12,167
Facilities Expense	-	-	-	-	-	-
Total Operating Expense	$ 133,276	$ 211,219	$ 344,679	$ 693,825	$ 930,853	$ 928,343
Net Surplus/(Deficit) - Before Internal Reallocations	$ (133,276)	$ (210,877)	$ (343,979)	$ (692,749)	$ (929,382)	$ (926,534)
Internal Reallocations						
Strategic Initiative Fund	133,276	200,000	200,000	200,000	200,000	200,000
Budget Reallocations	-	10,877	143,979	492,749	729,382	726,534
Total Internal Reallocation	**133,276**	**210,877**	**343,979**	**692,749**	**929,382**	**926,534**
Net Surplus/(Deficit) - After Internal Reallocations	$ -	$ -	$ -	$ -	$ -	$ -

Key Takeaways

- **Lower Enrollment Contributes to Reduced Revenue in Conservative Scenario:** Lower estimated enrollment and graduation rates further reduces already small operating revenues. [2]
- **Lower Expenses in Conservative Scenario due to Fewer Graduate Assistantships:** Despite incorporating higher annual increases for personnel and other operating expenses, the smaller number of graduate assistantships to be funded in the conservative model results in lower overall expenses, ranging from $133k in Year 0 to ~$930K in Year 5. By comparison, Year 5 expense totals in the moderate scenario are over $1M.
- **Under conservative model, program is net negative before internal reallocations (over $873k in FY2030 and over $850k in FY2031).** However, as in the moderate model, the total annual investment required from internal budget allocations, including the Strategic Initiative Fund, is relatively small.

Notes: 1) Assumptions detailed earlier in this section of the report on Slide 127. 2) Faculty-generated competitive grant funding is not included in the projections above as the assumption is that new grant funding will largely be used to fund new research rather than PhD program operations. Sources: IPEDS Data Center; WKU Proposal and Follow-Up Materials; WKU Tuition and Fees; US Bureau of Labor Statistics Consumer Price Index for All Urban Consumers.

Qualitative Benefits of Proposed PhD Program

A PhD in Data Sciences, specifically, lends some key benefits, such as limited institutional investment and strong workforce alignment. A move towards R2, more generally, also creates potential benefits to WKU.

Benefits of Data Sciences

Seizes Opportunity in Emerging Field with Broad Appeal

Data Sciences is associated with a growing labor market with broad appeal to students and professionals a variety of disciplines (including WKU's Master's of Public Health and Data Sciences, Computer Sciences, Geospatial Information System bachelor's degree).

The combination of few established regional competitors with strong workforce and enrollment demand makes a PhD in Data Sciences a strong candidate for WKU's first doctoral research program.

Maximizes Cross-Department Research, Minimizes Institutional Investment

An interdisciplinary approach enables the institution to leverage existing faculty and facilities and limits additional financial investment required to launch the program.

An interdisciplinary approach also maximizes potential opportunities for joint research across departments, providing potential research exposure to a broader set of graduate and undergraduate students.

Benefits of R2

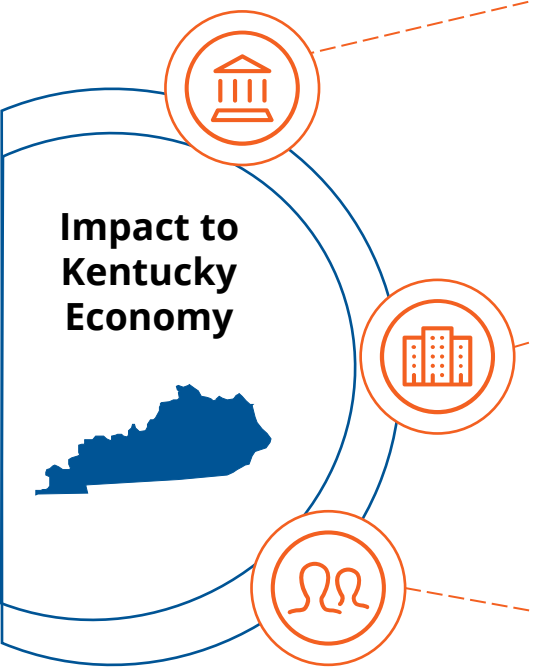
Elevates Institutional Profile

R2 status could elevate WKU's institutional profile in Kentucky and beyond, which could help them attract research-driven faculty, graduate students, which may result in generation of new competitive grant funding. WKU estimates that new competitive grant funding generated as a result of new program launch could be $75,000 in Year 3 and $150,000 in Years 4 and 5.

Sources: WKU Stakeholder Interviews, Proposal, and Related Materials.

Potential Economic Impact of PhD in Data Sciences and R2 Pursuit

The economic impacts to Kentucky and Bowling Green from the PhD in Data Sciences are likely minimal, but achieving R2 could spur industry investments and reach a new market of Kentucky graduate enrollment prospects.



R2 Addresses Gap in Current Kentucky Public University Footprint

- Currently no R2 institutions exist within Kentucky, representing a gap in the offerings available to Kentucky citizens who may be interested in pursuing research but may not be interested in, or qualified for, R1 level programs
- R2 status could attract students and faculty interested in research focus, resulting in positive impacts to the local economy by drawing these individuals to live and work in Bowling Green

R2 Attractiveness to Industry Investments in Bowling Green

- Representatives from the Bowling Green Chamber of Commerce and other local officials emphasize that reaching R2 status would elevate WKU's status with potential industry partners
- Recent local investments, while not directly tied to WKU, provide illustrative examples of impacts from industry investments (e.g., Envision AESC's investment in a new $2 billion electric vehicle plant which will create ~2,000 jobs)

Small Workforce Inflow from Data Sciences and Subsequent Programs

- Direct impact from PhD in Data Sciences faculty and graduates entering the local and commonwealth workforce is likely minimal (three new hires in first five years, five or fewer conferrals per year)
- Impacts to local and commonwealth workforce likely to expand with launch of the intended additional PhD programs (i.e., Disaster Sciences in 2027, Neuroscience in 2029, Learning Sciences in 2030) due to additional hires and conferrals

Sources: Electric Vehicle Battery Plant with 2,000 Jobs Coming to Bowling Green; WKU interviews, proposal, and related materials.

Student Demand

Overall Feasibility Assessment

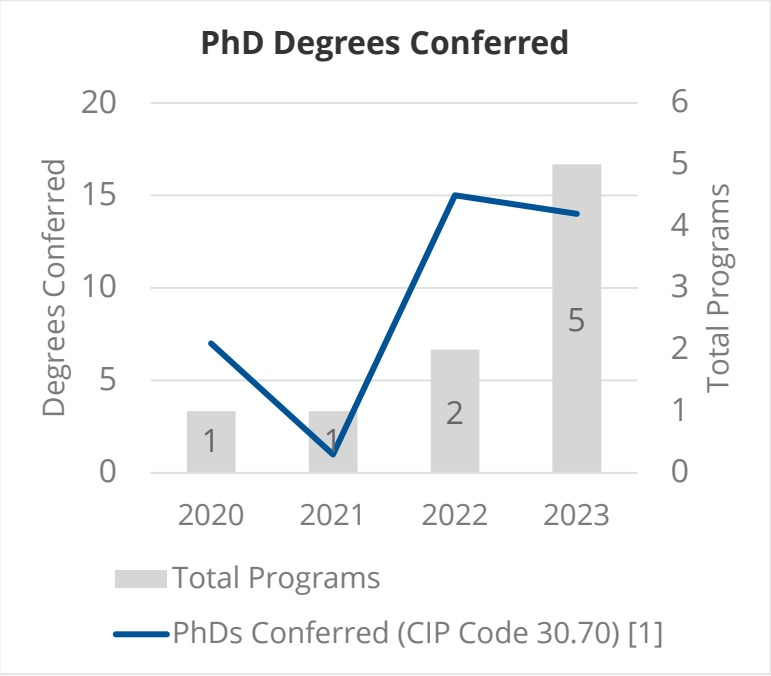
Student Demand 	G	**Data Sciences PhD**: Nationally, program conferrals in Data Sciences and related fields across levels increased from 2020 to 2023. Doctoral programs represent a small but growing enrollment market, with just 14 conferrals in 2023 (33% CAGR 2020-2023).

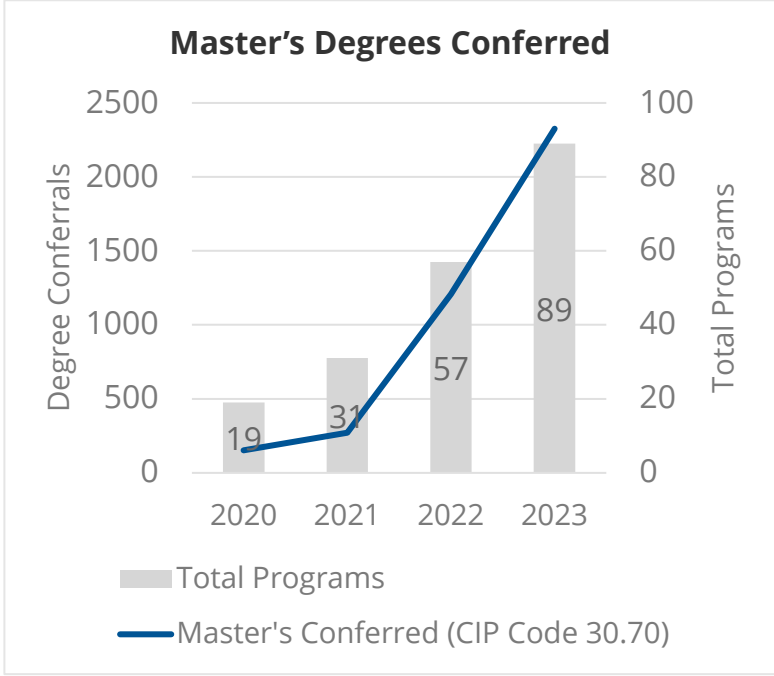
WKU | PURSUIT OF R2 "HIGH RESEARCH ACTIVITY" DESIGNATION

Data Sciences | Student Demand Overview

Data Sciences is a rapidly growing academic field, with 50+ new master's programs and 150+ new bachelor's programs launched from 2020 to 2023, indicating growing student demand.

The proposed PhD program would likely fall under CIP Code 30.70: Data Science. Degree conferrals and program data was sourced from IPEDs using this CIP Code.





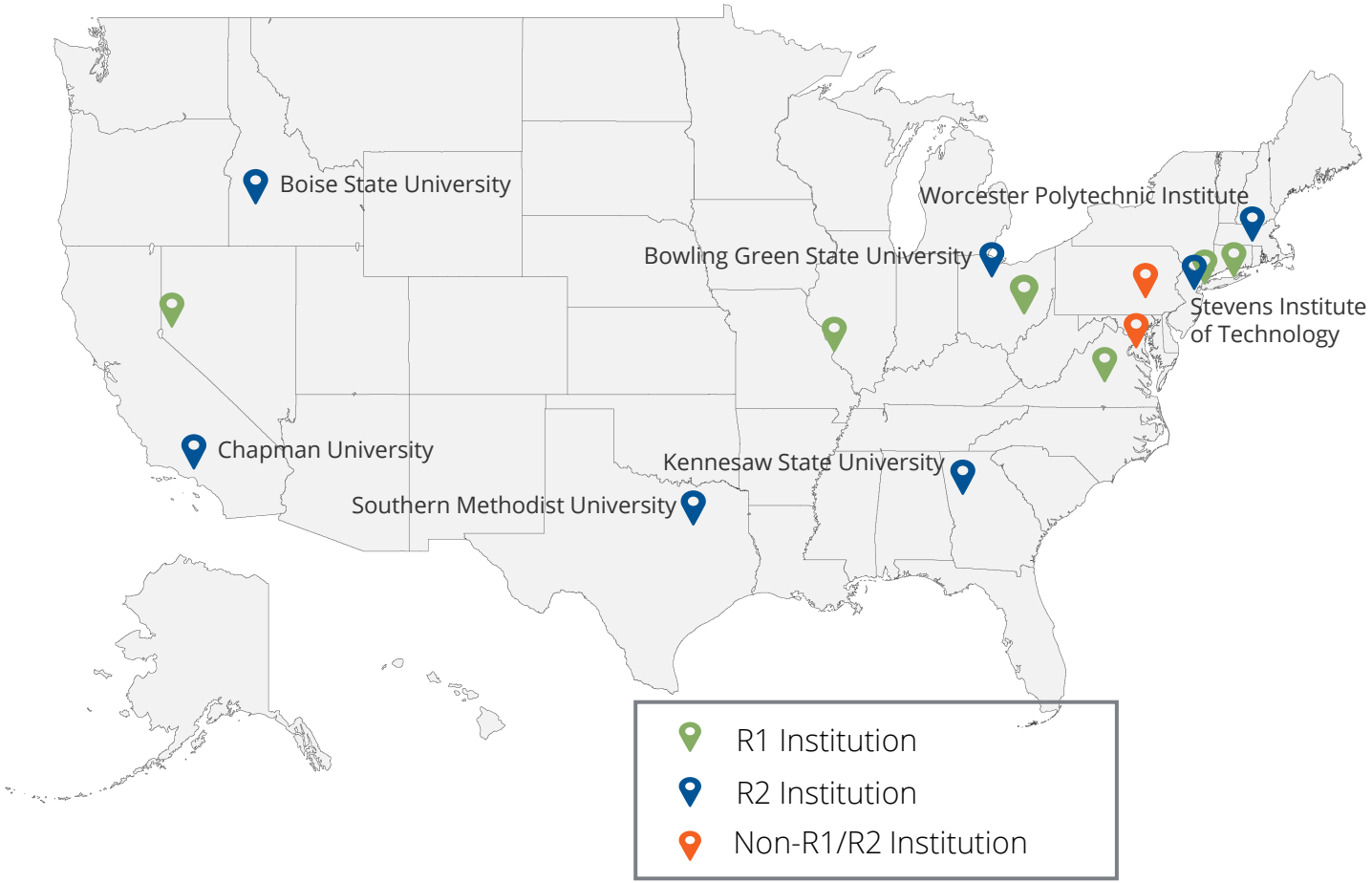
Growth in **Degree Conferrals**, 2020-2023	**100%**	**1420%**	**1850%**
Growth in **Total Programs**, 2020-2023	**400%**	**368%**	**468%**

Note: 1) Conferrals data from 2020 to 2022 also includes Kennesaw State University's program filed under CIP Code 30.7101: Data Analytics. Source: IPEDS Data Center, programs identified using CIP Codes 30.7001 and 30.7099.

Competitive Landscape for Data Sciences PhD Programs

Although data sciences PhD programs are a new market, many have launched at R1 and R2 institutions; a market may remain for a program at a Doctoral/Professional University in the South/Midwest.

Data Sciences PhD Programs (As of 2024)



Important Considerations

New and Growing Market

Doctoral data sciences programs **are less than a decade old**: the first PhD program was launched at Kennesaw State University in 2015. Since 2020, **70 new master's programs** and **150 new bachelor's programs** have launched.

Competitive Analysis

Of the sixteen identified data sciences PhD programs, **seven are at R1 institutions and seven are at R2 institutions**. WKU's Carnegie classification of Doctoral/Professional University could provide both a competitive advantage (e.g., different pool of likely applicants) or disadvantage (e.g., less attractive to competitive applicants).

Internal Enrollment Pipeline

Western Kentucky's BS in Business Data Analytics and online MS in Cybersecurity Data Analytics demonstrate the institution's ability to enroll and teach in the field of data science.

Note: 1) R2 institutions labeled by name, full list of schools found in Appendix. Sources: PhD in Data Science | Find the Best Data Science PhD Programs; Carnegie Classifications.

Workforce Alignment

Overall Feasibility Assessment

Workforce Alignment

G

Data Sciences PhD: Data Sciences occupations in Kentucky have grown steadily over the past five years (1.5% CAGR 2018-23), outpacing overall occupation growth in Kentucky, and with growth projected over the next decade.

WKU | PURSUIT OF R2 "HIGH RESEARCH ACTIVITY" DESIGNATION

PhD in Data Sciences Workforce Alignment

The proposed PhD program in Data Sciences would align with workforce trends within the region and Commonwealth in a local area experiencing strong overall population growth.

Expanding Demand for Data Analytics & Tech Jobs

- According to WKU leadership, "from 2017 to 2023, the number of tech jobs in South Central Kentucky and the Nashville area has grown by over 25%. This rate of job growth will outpace the national tech job growth of 10%."[1]
- A doctoral program in Data Sciences will align with the analytical and technological workforce demands of Bowling Green and the surrounding areas.

Growing Market Appeal of Interdisciplinary Skillsets

- The proposed PhD in Data Sciences will be interdisciplinary, blending STEM and business concepts. WKU's Gordon Ford College of Business or the Ogden College of Science and Engineering collaborated to develop the BS in Data Sciences and would continue working together.
- Given the enduring value of human skills such as curiosity, critical thinking, problem-solving, and logical reasoning, the interdisciplinary nature of the program will equip graduates with a diverse portfolio of technical and non-technical skills that may equip them for the workforce.

Strong Population Growth and Economic Investment in Bowling Green

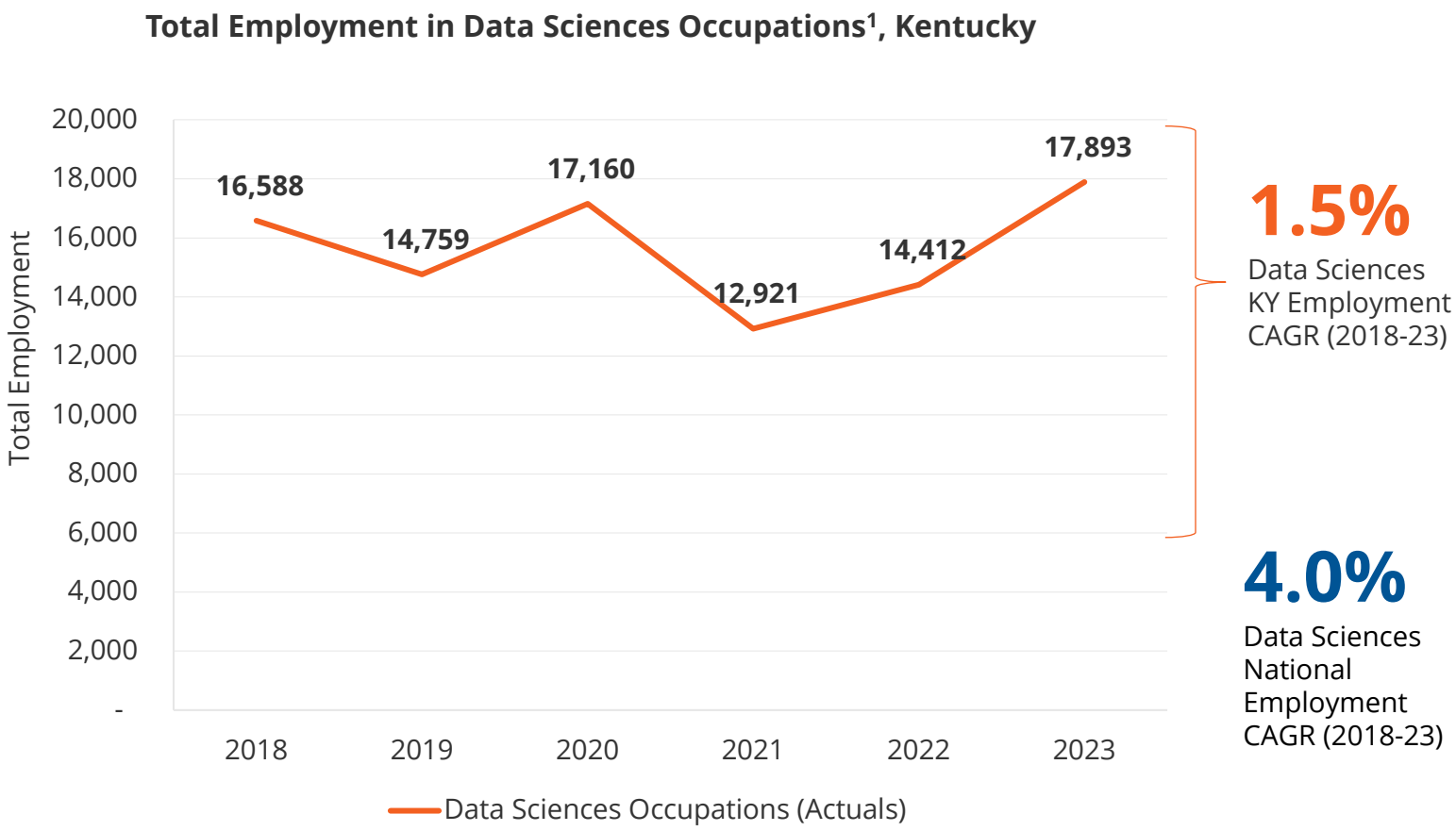
- Bowling Green is a quickly growing city, with a 31% increase in total population since 2010, outpacing growth in Kentucky over this period (4.3%).
- Bowling Green's Chamber of Commerce was also ranked #1 for economic development in communities <200,0000 people.
- Economic growth has recently been driven by a $2 billion dollar investment in an electric vehicle battery plant.
- Expanding WKU's academic and research capacity by launching a PhD program and pursuing R2 will align with local growth in population and industry investments.

Note: 1) Sourced from WKU materials. Sources: U.S. Census Bureau QuickFacts; Bowling Green Ranked #1 Economic Development Organization for Areas with Populations Under 200,000 - Bowling Green Area Chamber of Commerce; Electric Vehicle Battery Plant with 2,000 Jobs Coming to Bowling Green, Future of Work Institute™ | Deloitte US, WKU stakeholder interviews, proposal, and related materials.

Kentucky Employment in Data Sciences Occupations

KY employment in Data Sciences occupations[1] is growing at a rate of 1.5% annually from 2018-2023 with growth expected to continue into 2032.

Rising Demand For Data Sciences Jobs In Kentucky



1.5%
Data Sciences KY Employment CAGR (2018-23)

4.0%
Data Sciences National Employment CAGR (2018-23)

Key Takeaways

Data Sciences KY Job Growth

Employment in Data Sciences occupations is growing quickly, up 7.9% overall since 2018, outpacing general Kentucky occupational growth during this time (3.9%). Growth for these occupations in Kentucky is expected continue, with projections indicating an additional 2,200 jobs by 2032, with the largest growth anticipated for Statisticians.

National Data Sciences Demand

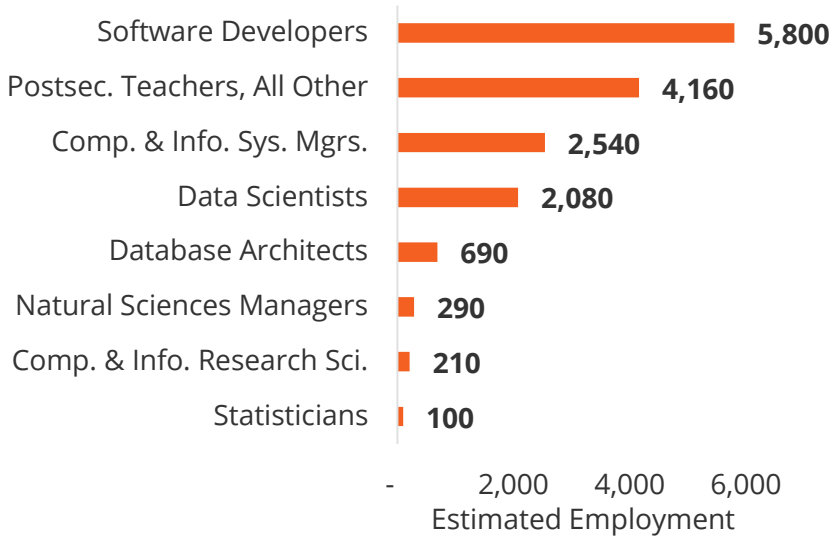
Despite solid growth in Kentucky for Data Sciences occupations, this is exceeded by national growth, indicating a strong labor market beyond Kentucky, of particular relevance as R2 status could elevate WKU's profile outside of the Commonwealth as well.

Note: 1) Data Sciences occupations identified as those Standard Occupational Classification (SOC) codes aligned with Classification of Instructional Programs (CIP) codes 30.7001 – Data Sciences and 30.7099, - Data Science, Other as identified using the NCES CIP-SOC crosswalk. Occupation employment totals include SOC code equivalents from prior years in instances where SOC codes changed. Sources: Bureau of Labor Statistics Occupational Employment and Wage Statistics; NCES CIP-SOC Crosswalk; Projections Central Long-Term Projections.

Occupation and Salary Alignment with Data Sciences

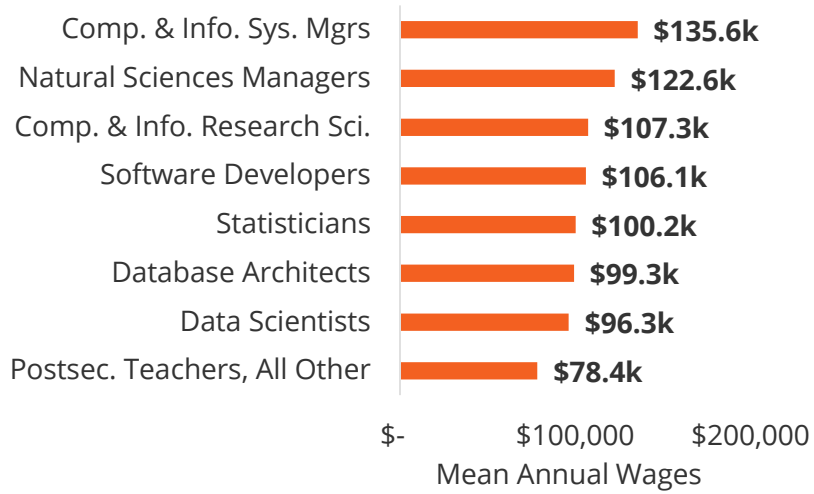
The Data Sciences field is aligned with a number of technology-focused occupations[1], with average salaries for these occupations upwards of $105,000.

KY Data Sciences Employment by Occupation[1], 2024



- Jobs for data sciences-affiliated occupations degrees in Kentucky are primarily technology-centric, including Software Developers, Data Scientists and Computer and Information Sciences Researchers.
- Occupations span a variety of national industries, ranging from Computer Systems Design, Federal/State/Local Government, and Management, Scientific, and Technical Consulting Services.

KY Data Sciences Average Annual Salaries by Occupation[1], 2024



- The average annual wage for all data sciences-affiliated occupations was over $105,000, with top salaries for management occupations.
- Lowest salaries for these occupations are reported for Postsecondary Teachers, All Other[2], indicating that financial return on investment for Data Sciences PhD graduates may lead them to careers in industry rather than academia.

Notes: 1) Data Sciences occupations identified as those Standard Occupational Classification (SOC) codes aligned with Classification of Instructional Programs (CIP) codes 30.7001 – Data Sciences and 30.7099, - Data Science, as identified using the NCES CIP-SOC crosswalk. 2) Postsecondary Teachers, All Other includes all post-secondary employment not listed under one of the 36 specific Postsecodary Teacher SOC codes, and therefore not all of these jobs may align with Data Sciences PhDs. Sources: Bureau of Labor Statistics Occupation Profiles; Kentucky Center for Statistics Employment and Wages by Occupation; NCES CIP-SOC Crosswalk.

Faculty Recruitment

Overall Feasibility Assessment

Faculty Recruitment

G

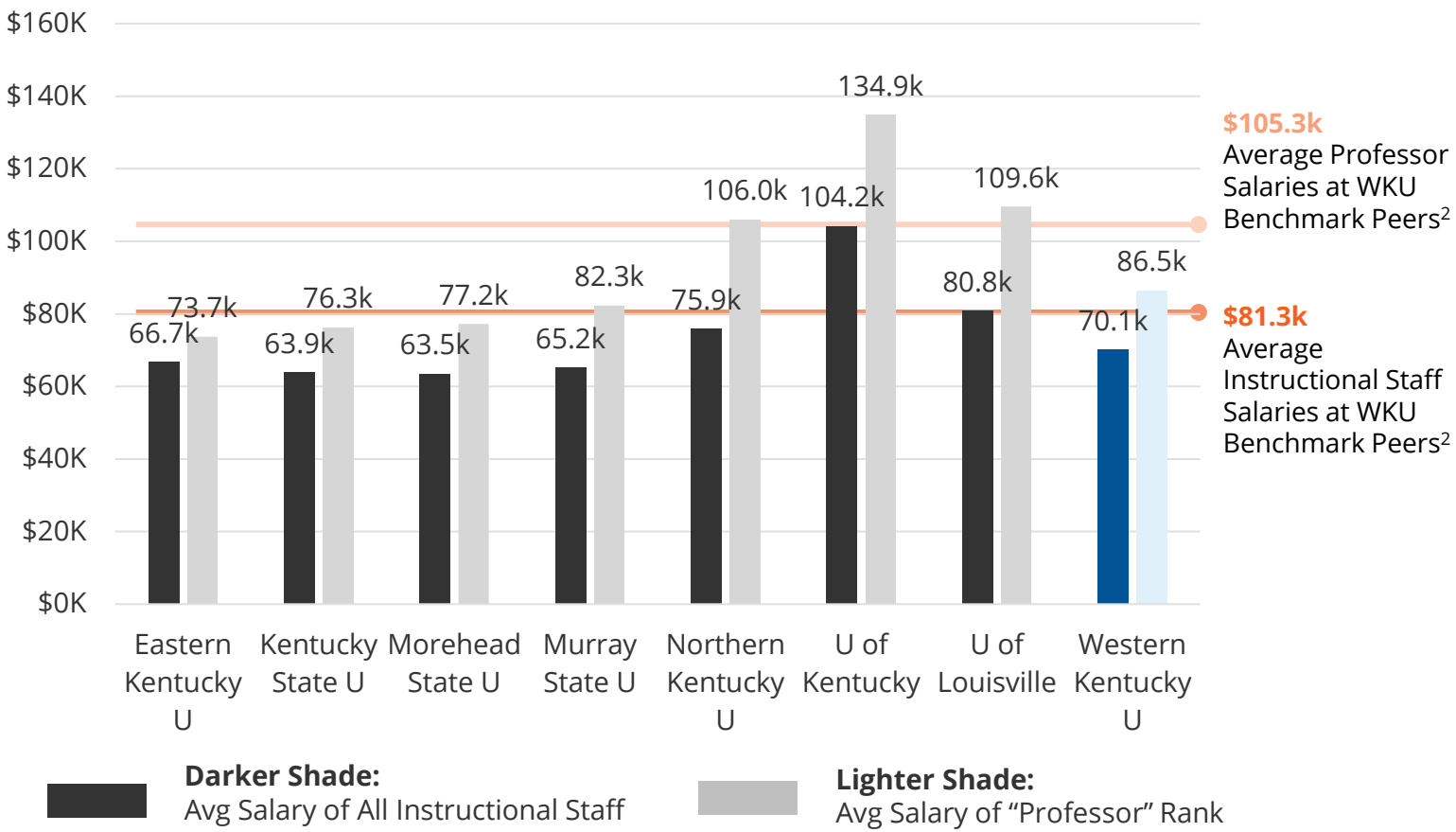
Data Sciences PhD: WKU is planning a relatively small number of faculty hires, which limits faculty recruitment risks. Proposed salaries are in line with average faculty salaries at KY comprehensive peers.

WKU | PURSUIT OF R2 "HIGH RESEARCH ACTIVITY" DESIGNATION

WKU Faculty Recruitment Considerations

Within Kentucky, WKU salaries are above Kentucky peer comprehensive averages. However, Western Kentucky's Instructional Staff and Professors salaries fall below aspirational benchmark peers.

Average Salaries of Full-Time Instructional Nonmedical Staff equated to 9-Months Worked, by Academic Rank: Academic Year 2022-23[1]



Key Takeaways

- **WKU's wages** for all Instructional Staff and Professors **are above the average for Kentucky four-year comprehensive peers.** Only one comprehensive peer, **Northern Kentucky University,** has higher salaries.
- **WKU's salaries rank below the average across its established list of benchmark peers. Fifteen of the eighteen peer institutions on this list are designated as R2 or higher** research activity, indicating WKU salaries have room to grow on the path to R2 status but may not be entirely out of line with its current classification.
- **WKU's location in Bowling Green, likely to ease faculty hiring.** Bowling Green's population grew 5.4% from 2020 to 2023, compared to 0.4% for Kentucky, and 1.0% for the U.S. at large. **The city's proximity to Nashville (<90 miles), recent economic investments,[3] and related growth also contribute to potential desirability** for candidates.

Notes: 1) Reflects IPEDS "All instructional staff total of Average salaries of full-time instructional nonmedical staff equated to 9-months worked, by academic rank: Academic year 2022-23;" 2) See Appendix for full list of WKU Benchmark Peers; 3) Recent economic investments include Envision AESC's $2 billion electric vehicle battery plant. Sources: Electric Vehicle Battery Plant with 2,000 Jobs Coming to Bowling Green; IPEDS Data Center; U.S. Census Quick Facts; WKU proposal and related materials; WKU Benchmark Universities.

Accreditation Requirements

Overall Feasibility Assessment

Accreditation Standards

G

Approval of new doctoral programs, including Data Sciences PhD, will require review and approval by SACSCOC under the Substantive Changes process.

Relevant SACSCOC Accreditation Requirements

A PhD in Data Sciences would require approval by SACSCOC, WKU's accrediting body, as it is a new program and results in a substantive change to the institution.

Substantive Change Policy

- SACSCOC requires review of "Substantive Change," which includes anything that involves significant modification or expansion of the nature and scope of an accredited institution, particularly those deemed high-impact, high risk, or with potential to impact educational quality.
- If WKU's proposal to launch a PhD in Data Sciences is approved, WKU will need to follow the Substantive Change process for "New Program – Approval," as 50-100% new content is a significant departure from the institution's existing programs.

New Program Approval Process and Deadlines

Submission Elements:

WKU will need to submit the following to receive necessary approval from the Executive Council of the SACSCOC Board of Trustees to launch a new doctoral research program:

- Fee
- Prospectus[1]

Submission Deadlines:

- For changes to be Implemented July 1-December 31: **January 1**
- For changes to be implemented January 1-June 30: **July 1**

Note: 1) A list of required prospectus elements can be found in the Appendix. Sources: SACSCOC Substantive Change Policy and Procedures

KSU | Doctor of Philosophy in Integrated Agroecology and Sustainable Agriculture

Financial Health Assessment

Overall Feasibility Assessment

Financial Health	R	Although KSU is showing some signs of financial improvement, including progress on its Management Improvement Plan to address cash flow and financial policy concerns, ongoing financial issues may provide an unsteady foundation from which to launch a new endeavor such as research PhDs.

Financial Health Assessment | Recent Historical Context

Several organizational and financial health concerns at KSU necessitated $23M in financial assistance from the Kentucky General Assembly in Fiscal Year (FY)22 as well as the launch of a Management Improvement Plan (MIP). KSU has made progress on the MIP, but some efforts are ongoing.

Findings and Resulting Actions from Kentucky CPE Assessment of Current Financial Status of KSU

- **Operating Deficits and Resulting Depletion in Cash Reserves:** Cash reserves declined precipitously from $14M in 2018 to $2M in 2020. $35M in operating deficits from 2016-2020 was a primary contributor to liquidity strain.
- **Improper Financial Practices, Policies, and Management**: Internal audit function was deemed "non-existent" due to internal vacancies. Staff, at the direction of senior leadership, failed to follow policy, and insufficient controls existed to prevent overspending established budgets. Audited financial statement deadlines were consistently missed.
- **$23M in Financial Assistance Provided by Kentucky General Assembly, Management Improvement Plan Launched:** As a result of the Kentucky CPE Assessment, the KSU received $23M to cover short-term projected cash shortfall. A Management Improvement Plan was developed to assist with organizational and financial stability, including elements related to policies, training, finances, academic programs, student success, and other areas of strategic importance.

Summary of Financial Health Assessment, Pension- and OPEB[1]-Adjusted Ratio Results from CPE Assessment of KSU Current Financial Status[2]

CFI Score	2015-15	2016-17	2017-18	2018-19	2019-20
Primary Reserve (35%)	1.37	1.14	1.19	0.60	0.25
Net Operating Revenue (10%)	-0.28	-0.37	-0.40	-0.40	-0.40
Return on Net Assets (20%)	-0.28	0.15	-0.19	-0.80	-0.44
Viability (35%)	3.50	3.50	3.50	3.50	0.38
CFI Score	4.33	4.42	4.10	2.90	-0.21

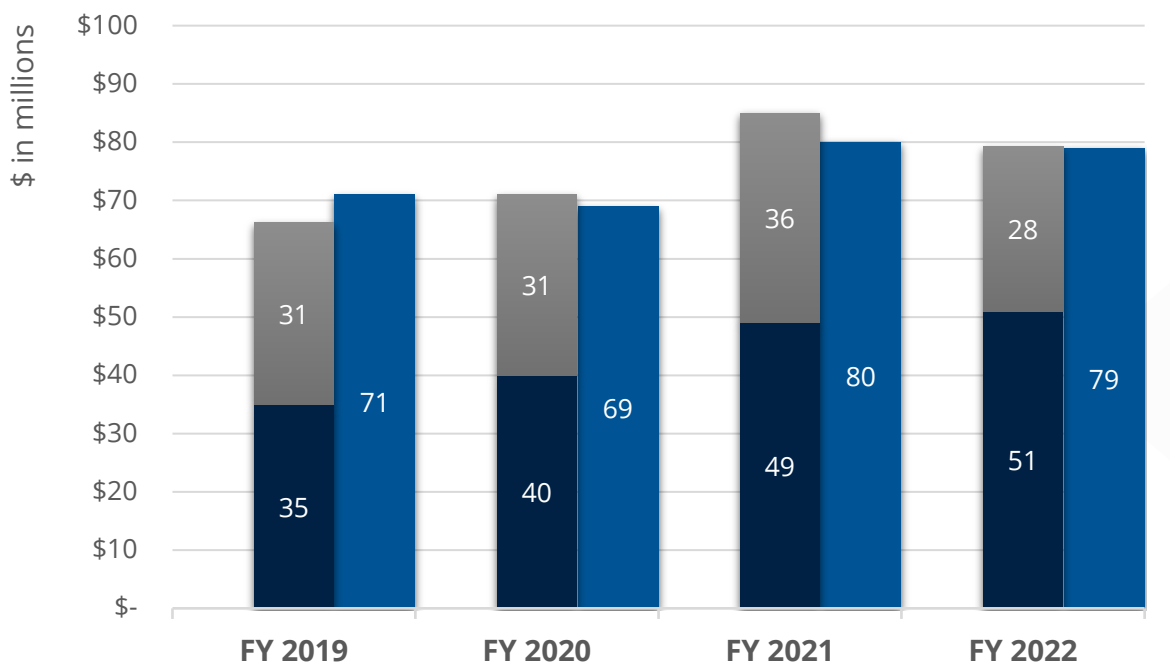
Notes: 1) Other Postemployment Benefits (OPEB); 2) CFI and component totals and other findings reflect those reported in Kentucky CPE Assessment of Current Financial Status of Kentucky State University. Sources: Kentucky State University Management Improvement Plan Quarterly Report for Q4 2024 – Revised; Kentucky CPE Assessment of Current Financial Status of Kentucky State University.

KSU | PHD IN INTEGRATED AGROECOLOGY

Financial Health Assessment | Net Position

In recent years, KSU has recorded positive changes in net position, ranging from $4.8M in FY21 to $0.3M in FY22. Surpluses in these years have been significantly bolstered by COVID aid and HB 250 stabilization funding, preventing a deficit due to growing expenses.

KSU Actual Ending Results (FY 2019 – FY 2022)



Key Takeaways

Unlike the other institutions, **KSU has not yet finalized their FY 2023 audit statements**. This delay may cause issues with the U.S. Department of Education and has prompted a warning from SACSCOC.

From FY19 to FY22**, revenues from Net Tuition and Fees grew by $7M**, driven by a 25.7% increase in enrollment from AY2018-19 to AY2021-22. Revenue from Auxiliaries also grew from $4.2M to $7M.

Federal and state COVID-19 aid, including $8M in FY21 and $11M in FY22, significantly bolstered revenues, preventing the institution from operating at a deficit. KSU also received **$23M in HB 250 Stabilization funding in FY22** to address cash shortfalls and projected budget imbalances.

Expenses have grown 11.2% since FY19, driven by increases in Institutional Support (+$5M since FY19) and Student Aid (+$6M since FY19). However, the FY22 audit attributed some of the increase in student aid to expenditures supported by COVID-19 federal funds.

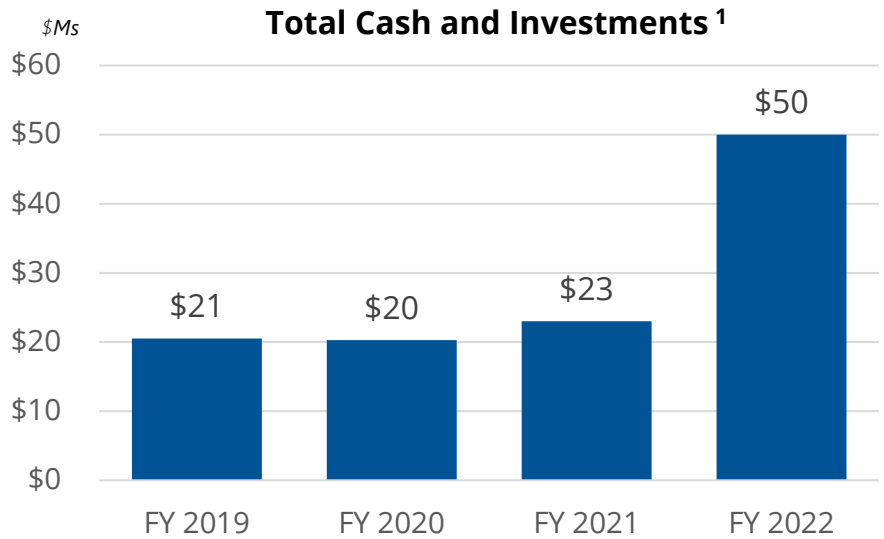
Revenue support through COVID relief funding and HB 250 Stabilization funding has helped KSU achieve positive operating margins in FY20-FY22; however, accelerating expenses and a lack of sufficient sustainable revenue streams may impact future financial performance.

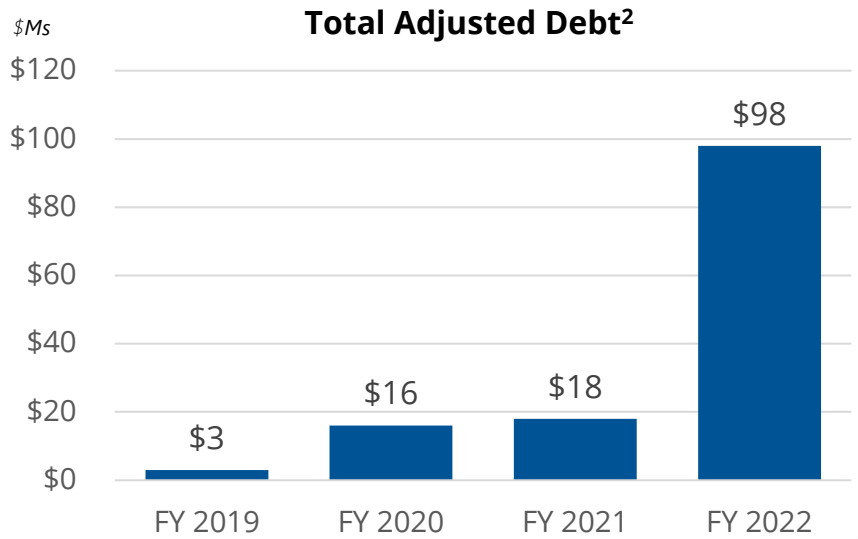
Note: 1) Includes Net Nonoperating Revenues and Capital Appropriations/Grants. Sources: KSU Audited Financial Statements; CPE Funding Model Outcomes data.

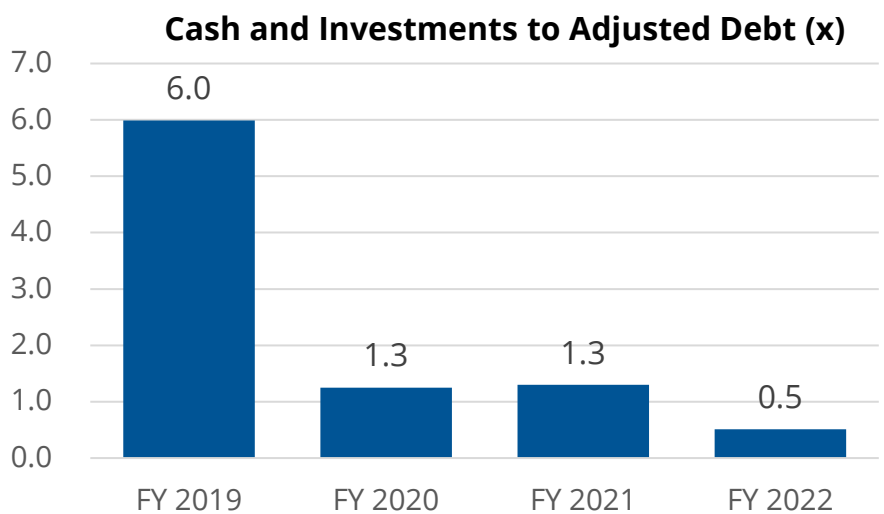
KSU | PHD IN INTEGRATED AGROECOLOGY

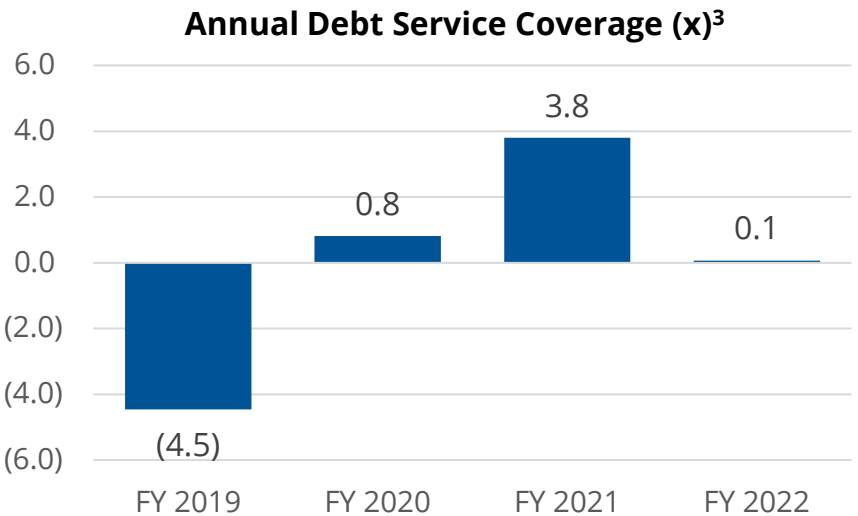
Financial Health Assessment | Balance Sheet Summary

KSU's balance sheet demonstrates risks due to elevated leverage, with Cash and Investments (C&I) at 0.5x total debt and annual debt service coverage at 0.1x as operating margins are challenged.









Key Takeaways

Growing Cash and Investments
Cash and Investments increased 138% from FY 2019 to FY 2022. The primary driver was the addition of $22M in restricted cash and cash equivalents from "cash held by trustee for certificates of participation project."

Large Increase in Total Adjusted Debt
Total Adjusted Debt increased by $80M from FY 2021 to FY 2022, driven by $57M in certificates of participation, which is being used to fund campus renovations, and $23M in HB 250 stabilization funding.

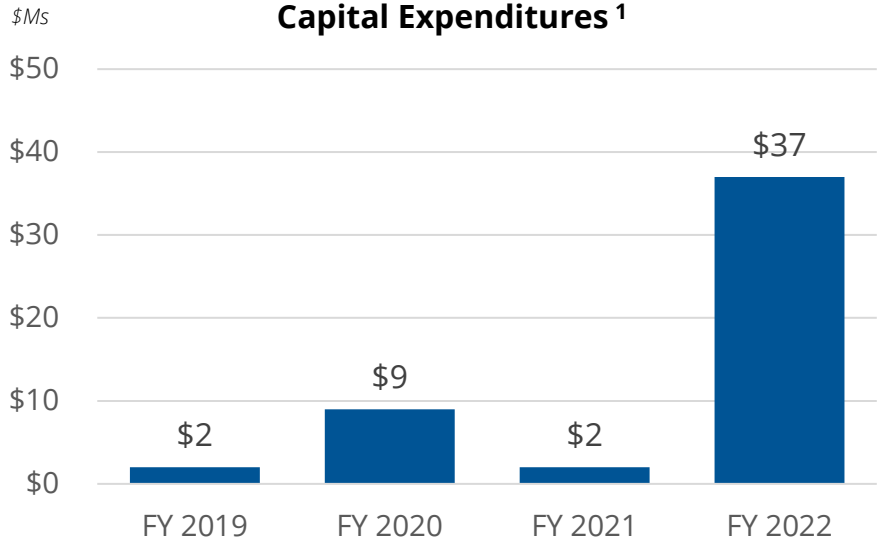
Elevated Leverage Position
The institution's growing debt load, with C&I at 0.5x debt and an annual debt service coverage of 0.1x, has weakened its ability to fund future strategic initiatives through additional debt.

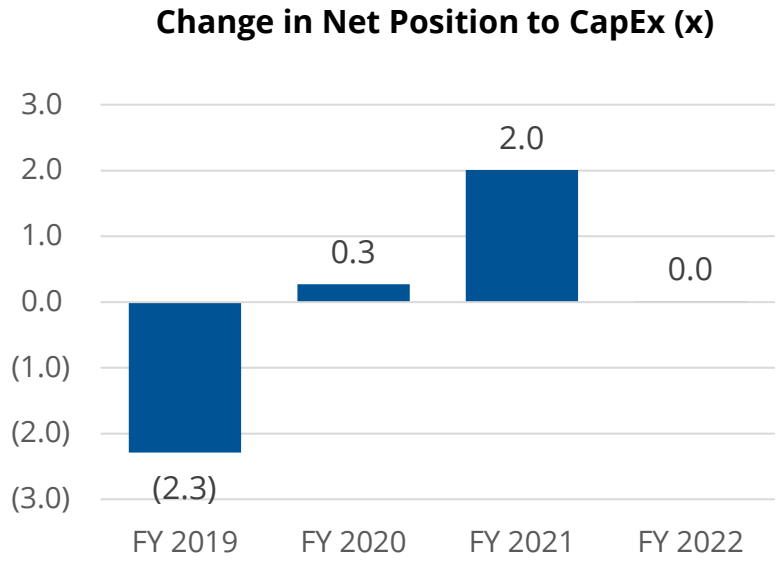
Notes: 1) Reflects Cash and Cash Equivalents, Restricted Cash and Cash Equivalents, Investments; 2) Reflects Lease Obligations/Finance Purchase, Note Payable to City of Frankfort, General Receipts Bonds, Bond Discount, Certificates of Participation, Certificates of Participation-Premium, Lease Liability, HB 250 Stabilization Funding; 3) Reflects Principal Paid on Capital Debt, Interest Paid on Capital Debt. Source: KSU Audited Financial Statements;

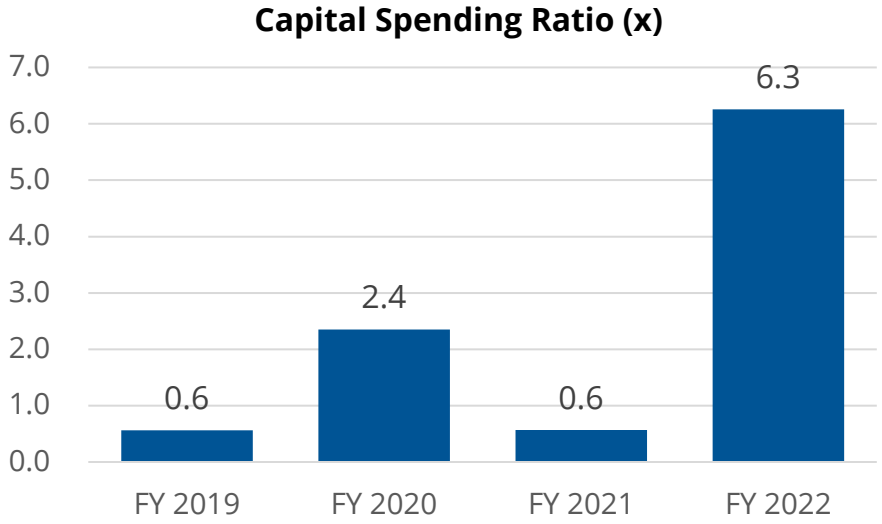
KSU | PHD IN INTEGRATED AGROECOLOGY

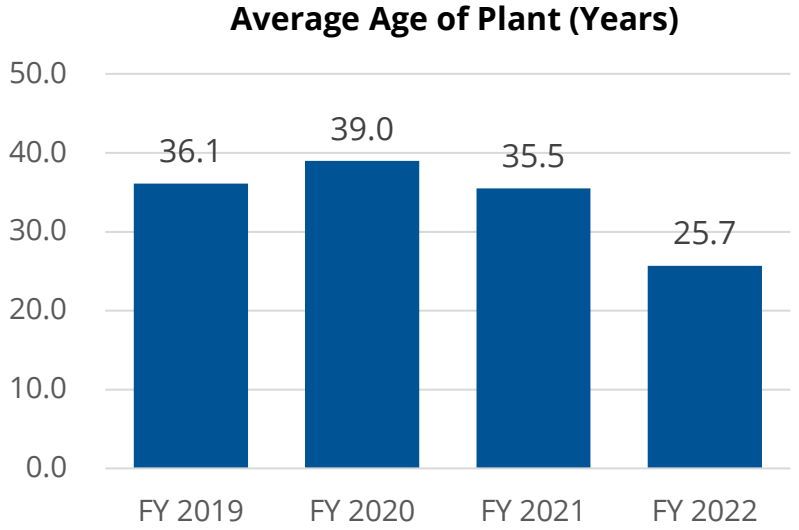
Financial Health Assessment | Capital Expenditures

Supported by state and federal appropriations, KSU accelerated capital expenditures in FY22 to address aging facilities and deferred maintenance.









Key Takeaways

Growth in Capital Spending
Capital spending reached its peak in FY 2022, increasing by $35M compared to FY 2019. This increased spending is aligned with the aging of facilities, which saw a ten-year average age reduction in FY 2022.

Addressing Aging Facilities
Kentucky State's facilities are in significant need of investment due to their high age. Recent increases in capital investments have specifically targeted new construction and campus renovations, including a new residence hall.

State-Supported Growth
The university's increase in strategic capital expenditures has been heavily supported by state and federal capital support for deferred maintenance and renovations. Construction of a new residence hall is being funded through the sale of certificates of participation.

Note: 1) Reflects Purchase of Capital Assets. Source: KSU Audited Financial Statements.

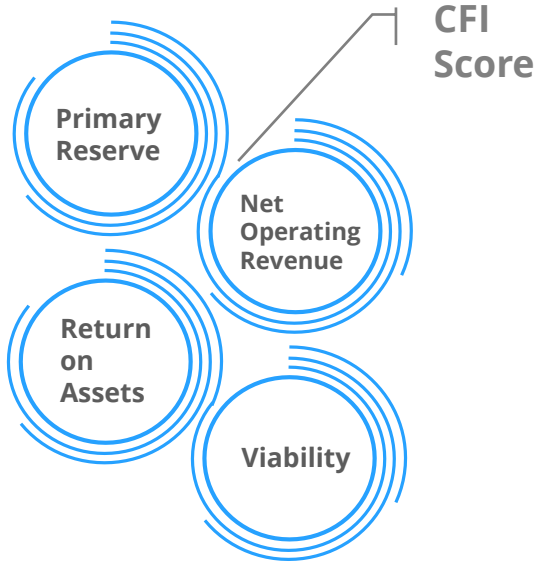
KSU | PHD IN INTEGRATED AGROECOLOGY

Financial Health Assessment | Composite Financial Index (CFI)

KSU's Composite Financial Index (CFI) score of -0.74 in 2022[1] provides a point-in-time indicator of a need to consider substantive programmatic adjustments. The current financial environment presents some risks to allocating resources to new projects.

The four ratios are **primary reserve, net operating revenue, return on assets, and viability**. These ratios **gauge the fundamental elements of the financial health** of an institution. The composite score reflects the overall relative financial health along a scale from **negative 4.0 to positive 10.0** for higher education institutions. A score greater than 3 is considered relatively financially healthy.

CFI Components



Key Ratios

Primary Reserve Ratio

$$\frac{\text{expendable net assets}}{\text{total expenses}}$$

Net Operating Revenue Ratio

$$\frac{\text{net operating income}}{\text{total unrestricted operating revenues}}$$

Return on Assets Ratio

$$\frac{\text{change in net assets}}{\text{total net assets}}$$

Viability Ratio

$$\frac{\text{expendable net assets}}{\text{plant-related debt}}$$

KSU CFI Score[2,3]	Ratio	CFI Score
Primary Reserve	0.04x	0.10
Net Operating Revenue	-1%	-0.07
Return on Assets	-12%	-0.80
Viability	0.04x	0.03
Total	---	-0.74

Notes: 1) KSU Audited Financial Statements for 2023 were not available; 2) Adjusted to not include Pension Expense Adjustments and OPEB expense adjustments; 3) Ratio calculations include Component Unit (CU) data. Sources: KSU Audited Financial Statements; Higher Learning Commission CFI Worksheet; TIAA The Financial Resilience of Independent Colleges and Universities (2017).

Student Success Assessment

Overall Feasibility Assessment

Student Success

R

KSU has the lowest first-year retention rates and six-year graduation rates of KY four-year public universities. Six-year graduation rates have improved from 18% in 2018 to 33% in 2022 but remain below the KY comprehensives average.

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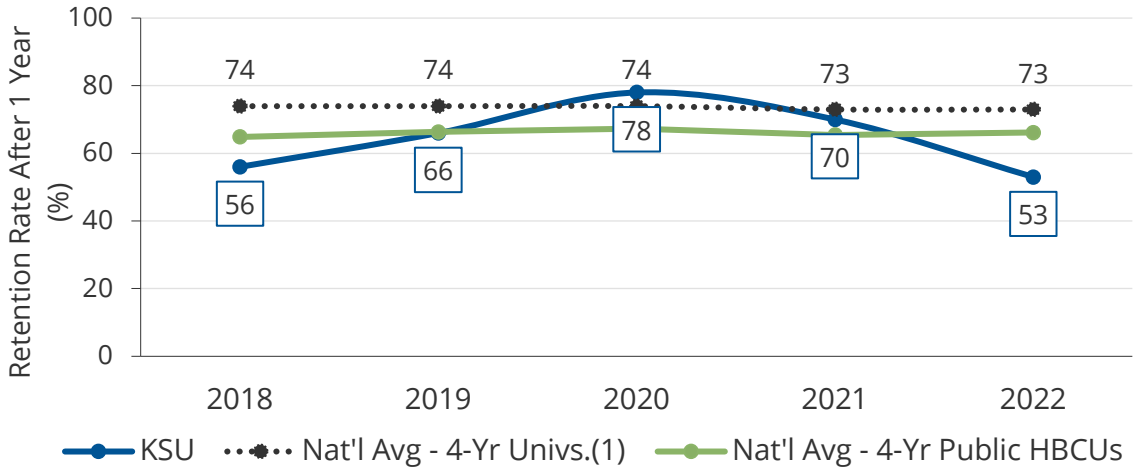
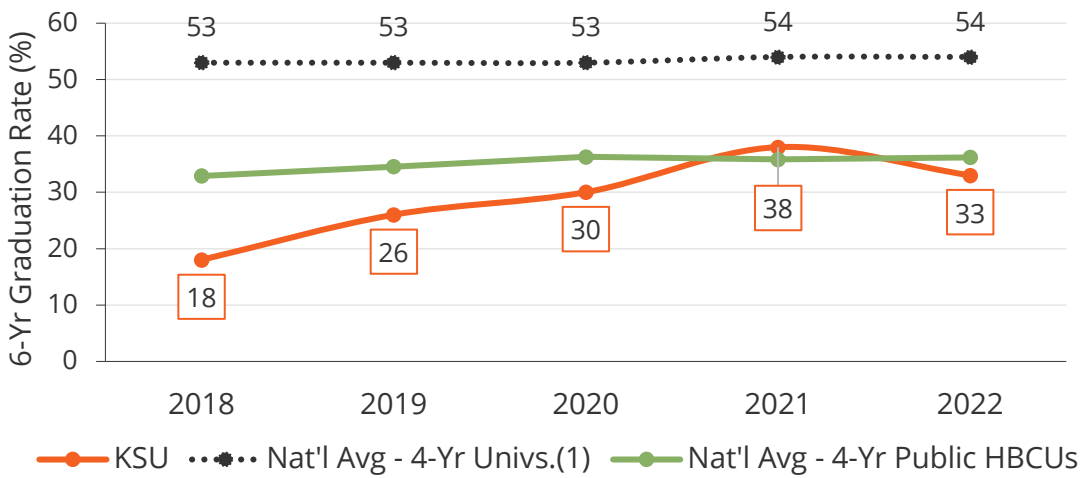
Current State Performance on Key Student Success Metrics

KSU's undergraduate graduation and retention rates, while showing some signs of improvement in recent years, both fell from 2021 to 2022.

KSU First-Year Retention Rate (First-Time, Full-Time Students)



KSU 6-Year Graduation Rate (First-Time, Full-Time Students)



Retention rates at a five-year low…

- KSU's first-to-second year retention rates for first-time, full-time first-year undergraduate students rose to meet the national average in Fall 2020, but it has since fallen 25 percentage points to 53% in Fall 2022. While all Kentucky comprehensives experienced declining retention from Fall 2020 to Fall 2021, KSU saw larger, sustained declines from Fall 21 to 22.
- KSU's retention similarly lagged behind those of its Public HCBU peers, falling thirteen percentage points below this average.

…but graduation rates largely trending upwards.

- Kentucky State University's undergraduate graduation rates have improved markedly since 2018. The share of students receiving a bachelor's or equivalent within six years grew from 18% in 2018 to 33% in 2022.
- Although lagging behind national graduation averages, KSU has closed the gap with its Public HBCU peers, trailing this average by three percentage points in 2022.

Note: 1) National averages include all public and private not-for-profit four-year colleges and universities as reported in IPEDS. Source: IPEDS Data Dashboard.

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Current State Performance on the Comprehensive Funding Model

KSU performed worse than the KY comprehensive average on seven of the KPIs incentivized by the performance funding model.

CPE utilizes a performance-based funding model that aligns funding with institutional performance on desired state policy goals. After each institution receives their "funding floor", the remaining resources are distributed based on the funding formula:

35% *based on student success metrics* **35%** *based on course completions* **30%** *based on operational support.*[1]

From 2013-14 to 2022-23, KSU performed worse than other KY public comprehensive institutions on **seven out of nine KPIs:**

- Total Bachelor's Produced
- STEM+H[2] Bachelor's Produced
- Low Income Bachelor's Produced
- URM[3] Bachelor's Produced
- Progression at 30 Hours
- Progression at 60 Hours
- Progression at 90 Hours
- Student Credit Hours Earned
- FTE[4] Student Enrollment

- As an HBCU, it may not be meaningful to compare Kentucky State's performance on URM bachelor's production to other regional comprehensive universities in the Commonwealth.
- KSU's student body size is much smaller than the other comprehensives, so their performance is more sensitive to change than the other institutions.

Key

- Performed better than or equivalent to KY comps average
- Performed worse than KY comps average

Notes: 1) Funding proportions were amended to 40% for student success metrics and 30% for course completions for the 2024-25 funding distribution; 2) Science, Technology, Engineering, Math, and Health Sciences (STEM+H); 3) Underrepresented Minority (URM); 4) Full-Time Equivalent (FTE). Sources: 13 KAR 2:120E; Performance Funding - Ky. Council on Postsecondary Education; KRS 164.092; Workbook: Kentucky Postsecondary Education Interactive Data Dashboard; Funding Model Data provided by CPE.

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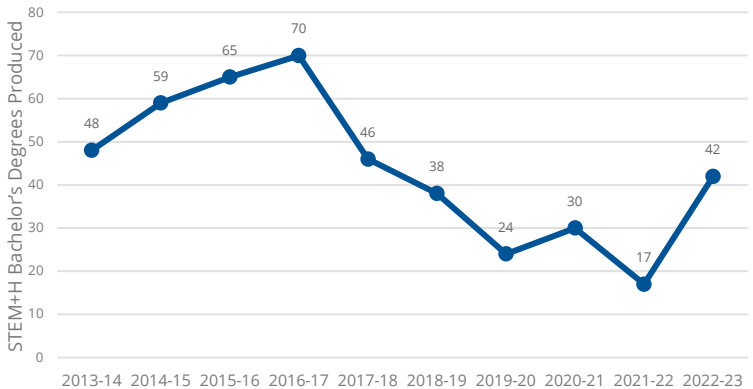
Current State Performance on the Comprehensive Funding Model

Kentucky State has recorded net decreases in STEM+H, URM, and Low-Income Bachelor's degrees production over the last decade.

Data Trends

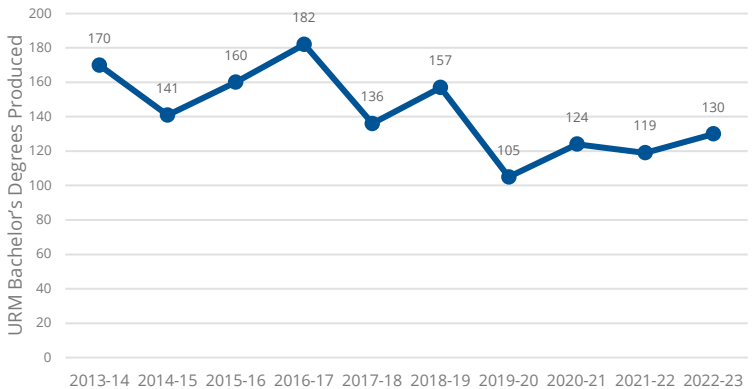
STEM+H Bachelor's Produced



13% KSU | **7%** KY Comps[2]

number of STEM+H Bachelor's produced from 2013-14 to 2022-23

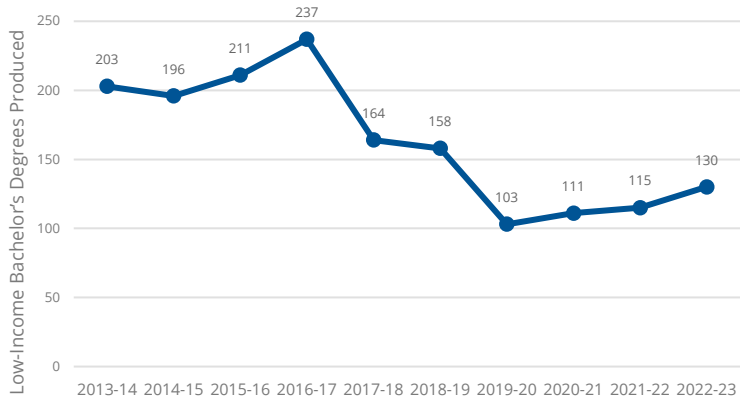
Underrepresented Minority Student (URM) Bachelor's Produced[1]



24% KSU | **23%** KY Comps

number of URM Bachelor's produced from 2013-14 to 2022-23

Low-Income Bachelor's Produced



36% KSU | **15%** KY Comps

number of Low-Income Bachelor's produced from 2013-14 to 2022-23

Note: 1) The URM Bachelor's Degrees metric has been amended to "underrepresented students", defined as "first generation college students", for the 2024-25 funding distribution. 2) KY Comps refers to all six Kentucky public comprehensive universities: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University. Source: Funding Model Outcomes provided by CPE.

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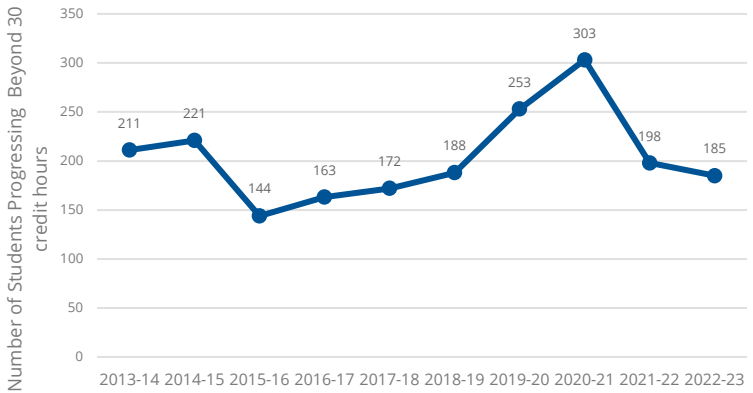
Current State Performance on the Comprehensive Funding Model

KSU's progression metrics have declined across the past decade, reflecting broader trends across the KY comprehensives.

Data Trends

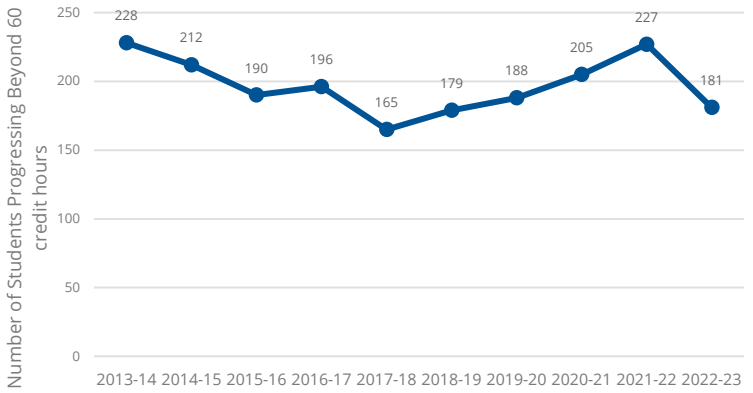
Progression @ 30 hours



12% KSU | **20%** KY Comps[1]

number of undergraduate students @ 30 hours from 2013-14 to 2022-23

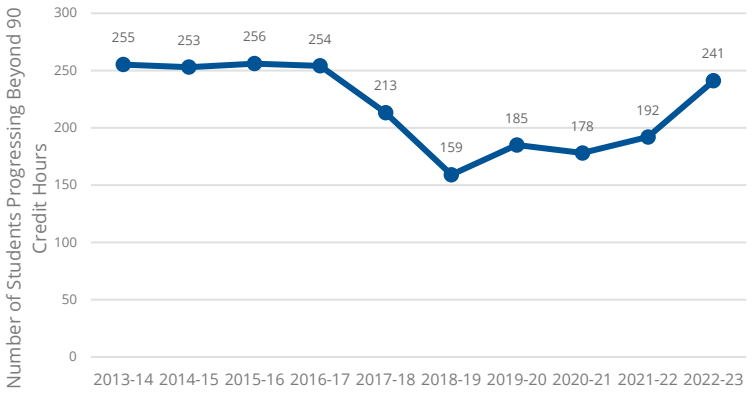
Progression @ 60 hours



21% KSU | **15%** KY Comps

number of undergraduate students @ 60 hours produced from 2013-14 to 2022-23

Progression @ 90 hours



5% KSU | **11%** KY Comps

number of undergraduate students @ 90 hours from 2013-14 to 2022-23

Note: 1) KY Comps refers to all six Kentucky public comprehensive universities: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University. Source: Funding Model Outcomes provided by CPE.

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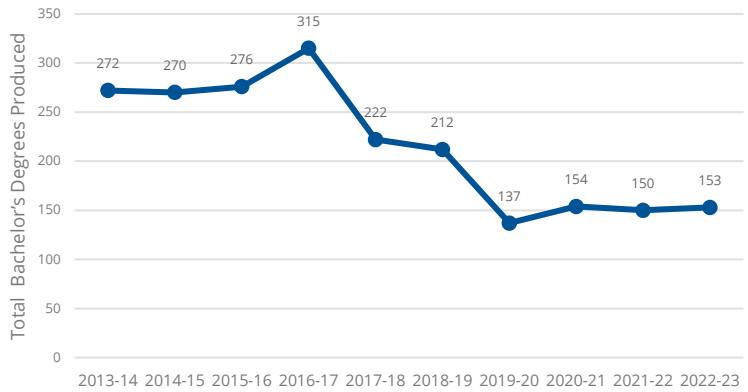
Current State Performance on the Comprehensive Funding Model

Across the past decade, KSU has experienced negative trends in enrollment and total bachelor's produced, shrinking from 2,033 total FTE student enrollment to 1,345 between Fall 2013 and Fall 2022.

Data Trends

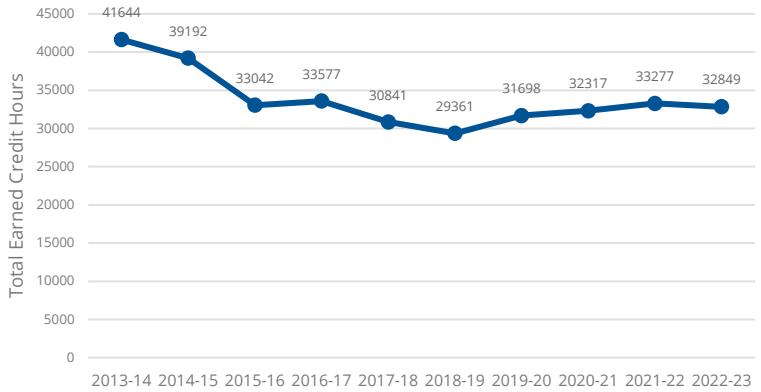
Total Bachelor's Degrees Produced



44% KSU | **8%** KY Comps[1]

number of Total Bachelor's produced from 2013-14 to 2022-23

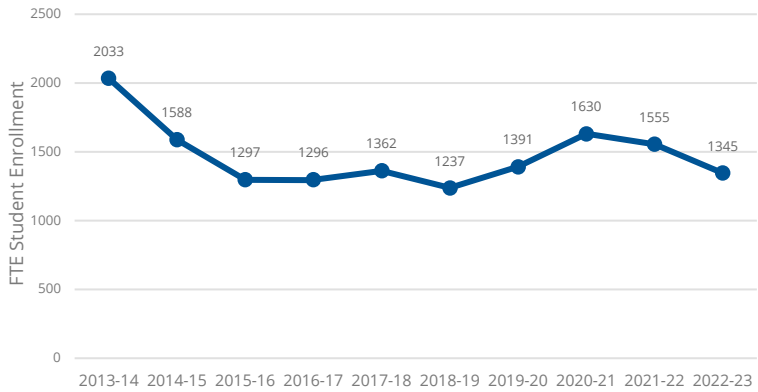
Student Credit Hours Earned



21% KSU | **16%** KY Comps

number of Student Credit Hours earned from 2013-14 to 2022-23

FTE Student Enrollment



34% KSU | **21%** KY Comps

number of FTE Student Enrollment from 2013-14 to 2022-23

Note: 1) KY Comps refers to all six Kentucky public comprehensive universities: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University. Source: Funding Model Outcomes provided by CPE.

Research Infrastructure Assessment

Overall Feasibility Assessment

Research Infrastructure

G

Thanks in part to its access to land-grant funding and ongoing faculty research contributions, KSU's research expenses far exceed its Kentucky comprehensive peers. Recent investments in the Office of Sponsored Research and facilities also supports viability of Integrated Agroecology PhD.

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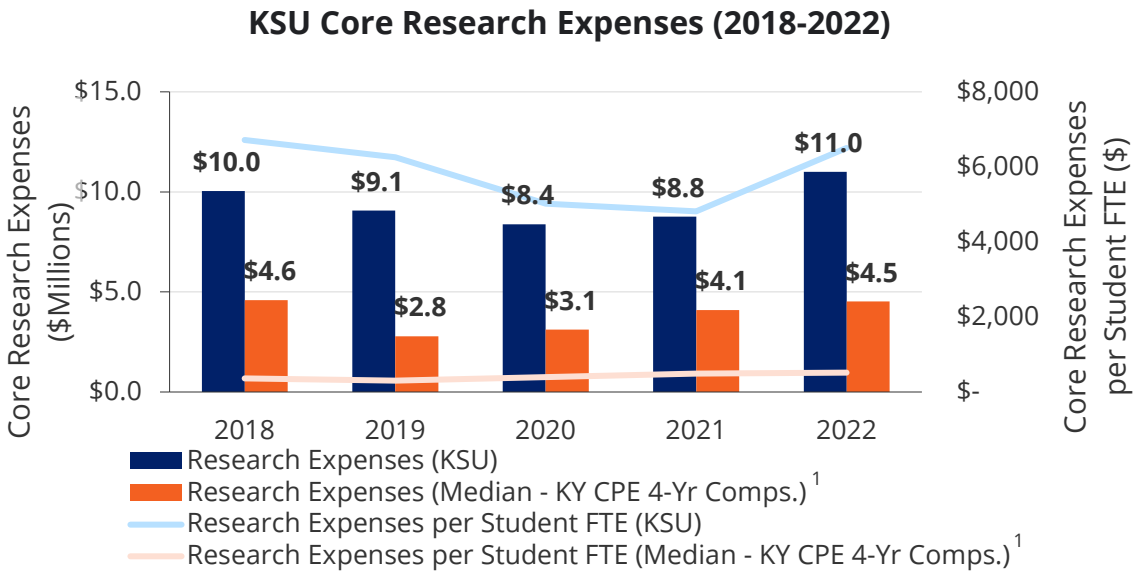
Current State Research Infrastructure

KSU's status as a land-grant institution lends strong research funding for core research expenses as well as facility investments.



Thanks in part to its access to land-grant funding and ongoing faculty research contributions, KSU's research expenses far exceed its Kentucky comprehensive peers[1], with over $11M in core research expenses in FY2022, compared to the median at Kentucky comprehensives of $4.5M. However, from 2018 to 2022, core research expenses at KSU grew at a slower rate than the Kentucky comprehensive peer average, with a CAGR of 2.3% for KSU compared to a CAGR of 4.0% for its peers.

Recent Research Infrastructure Investments at KSU Lend Support to Feasibility of PhD in Integrated Agroecology

KSU has focused on rebuilding its Office of Sponsored Programs (OSP) in recent years, with two hires in FY2023, including a full-time Director of OSP and a full-time Coordinator of Grants and Sponsored Programs. The unit is now comprised of five staff members.

Recent KSU capital projects also indicate renewed attention to research facilities, including the $7.4M USDA-funded renovation of the Atwood Research Facility in KSU's School of Agriculture and Natural Resources (pictured below). The 34,510 sq ft facility houses fourteen research laboratories as well as classrooms, teaching labs, and offices.

What is a Land-Grant Institution?

Land-grant institutions were **established to expand agricultural and technical education and access** to such education. **1890 Land-Grant institutions, which are historically black land-grant universities, are eligible for a variety of funding**, including both competitive grants and appropriations, primarily from the USDA's National Institute for Food and Agriculture (NIFA) and relevant state matching funds. **Funding is intended to "strengthen research, Extension, and teaching in the food and agricultural sciences" through institutional capacity investments.**

Note: 1) KY Comps refers to all six Kentucky public comprehensive universities: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University; Sources: Association of Public & Land-Grant Universities; IPEDS Data Center, KSU Atwood Research Facility; KSU Office of Sponsored Programs FY2023 Annual Report; Omni Architects Atwood Agricultural Research Building Renovation; USDA 1890 Land-Grant Institutions Program

Cost-Benefit Analysis

Overall Feasibility Assessment

Cost-Benefit Analysis 	Y	Like most PhD programs, Agroecology PhD is not expected to generate net surplus. However, the program will require a relatively limited institutional investment to support operational expenses given the small program size and existing infrastructure.

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Assumptions Driving Financial Model

KSU stakeholder discussions, program proposal and related materials, and peer/market research inform the drivers behind the financial model.

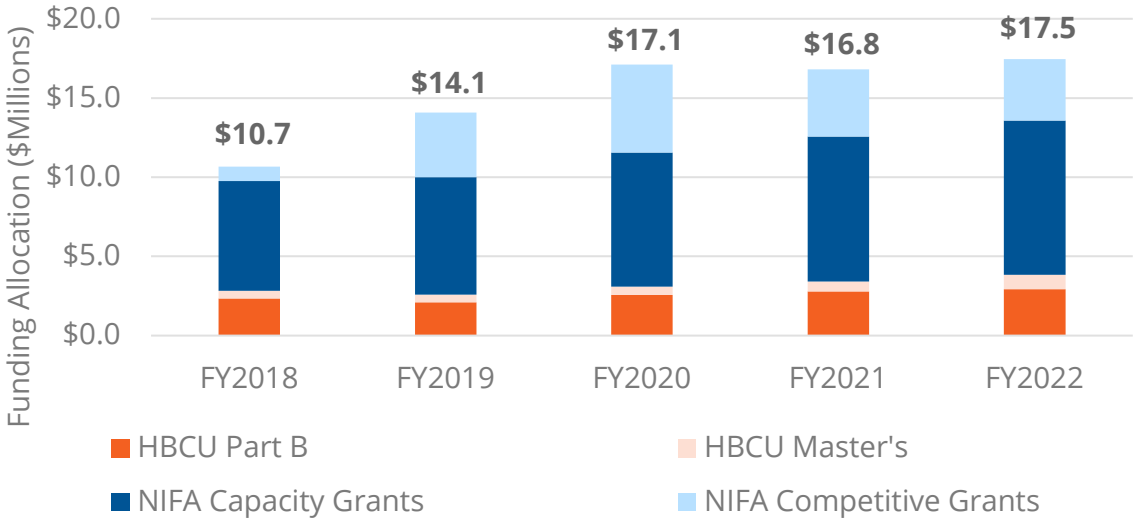
	Line Item	Forecast Approach	Moderate Drivers	Conservative Drivers
REVENUES	Enrollment	KSU Proposal Materials, Market Research and Peer Comparisons	Annual enrollment totals and international/domestic distribution were supplied by KSU and evaluated against peer conferral trends for similar PhD programs. KSU estimated a 66% graduation rate for the program, which is confirmed to be in line with the higher end of national PhD trends. KSU estimated slightly higher attrition for international than domestic students. Model assumes all attrition will occur between a student's 3rd and 4th year in the program.	Annual enrollment estimated to be 25% lower than moderate model. Graduation rates adjusted down to 55%. All other assumptions same as the moderate model.
REVENUES	Tuition & Fees	KSU Proposal Materials, KSU Historical Trends	Annual tuition and fees, including application fees, based on KSU AY2024-25 graduate rates, with annual increase projected at 2.0%, based on ten-year historical tuition increases at KSU. Per credit charges based on a 60-credit program with 18 credits accumulated in students' 1st to 3rd years in program, and 9 credits in students' 4th year.	Same assumptions as moderate model.
REVENUES	Graduate Fellowships	KSU Proposal Materials	Model assumes that full tuition scholarships/fellowships for domestic students will be funded through the HBCU Master's Grant. KSU affirmed that this funding source was viable, but the project team could not confirm with certainty. However, it is common practice for PhD programs to fund tuition scholarships for enrolled students, so we have built scholarships for all domestic students into the model despite uncertainty around funding source. KSU indicated that international students will not be eligible to receive a tuition scholarship/fellowship.	Same assumptions as moderate model.
EXPENSES	Faculty and Staff Salary and Benefits	KSU Proposal Materials, KSU Historical Trends, Market Research and Peer Comparisons	Faculty and staff headcounts shared by KSU in proposal. KSU indicated faculty will be hired in Years 3 and 4 with existing faculty sufficient to operate the program until that time. Model assumes staff will be hired in Year 0. Starting salaries for faculty and staff supplied by KSU, but model forecasts a 4.7% annual increase, based on five-year trend analysis of KSU's instructional staff/faculty expenses as reported in IPEDS. Employee Benefits are projected at 40% of compensation, in line with existing KSU rates.	Same headcounts, benefit rates, and initial salary rates as moderate model, but annual increase for salary expenses estimated one percentage point higher (5.7%).
EXPENSES	Faculty Start-up Packages	KSU Proposal Materials, Market Research and Peer Comparisons	KSU provided estimated start up funds at $20,000 per faculty, per year. Assume that start-up funds will be available to faculty for a minimum of three years after hiring, likely five years, which would provide a total start-up package of $60,000-$100,000 per faculty, which is in line with the lower end of peer comparison estimates.	Same assumptions as moderate model, but start-up fund costs projected to be 15% higher.
EXPENSES	Graduate Assistantships	KSU Proposal Materials	Employs rate used in KSU proposal and related materials ($40,000 per student per year).	Same assumptions as moderate model.
EXPENSES	All Other Operating Expenses	KSU Proposal Materials, National Trends	Incorporates estimates and timeline for expenses as outlined in KSU proposal and related materials with minimal adjustments. Detailed breakdown of these assumptions is included in the Appendix. Model incorporates annual increase for all other operating expenses equal to 2.7%, based on the average annual inflation rates from 2014-2023.	Same assumptions as moderate model, but annual increase equal to 4.0% (avg annual inflation 2019-23).
OTHER	Internal Reallocations	KSU Proposal Materials, KSU Historical Trends, External Funding Analysis	Model follows KSU proposal which indicates that land-grant and HBCU appropriations and other recurring, noncompetitive grants and contracts will be used to offset costs of the program in the following areas: staff salaries/benefits, graduate assistants, student support, program development/curriculum design, marketing. Model assumes the total to be reallocated from E&G funds to be equal to the remaining program expenses after net revenue and internal reallocations from land-grant and HBCU funds, based on KSU proposal.	Same assumptions as moderate model.

Note: Faculty-generated competitive grant funding is not included in the projections above as the assumption is that new grant funding will largely be used to fund new research rather than PhD program operations.

Potential Funding Sources and Impacts to New Grant Generation

KSU's HBCU and Land-Grant status provides a recurring source of funding that could be used with reallocations from E&G[1] funds to support program expenses as, like most research PhD programs, higher enrollment will result in higher net costs rather than additional net revenue.

KSU NIFA[4] and HBCU[5] Funding, FY18-22



- **Land-Grant Funding:** Nearly $9.8M in capacity grants was obligated by NIFA in FY2022 as a result of KSU's land-grant status. KSU has indicated that a portion of such funding in future years would be used to support costs related to the PhD in Integrated Agroecology as these funds are intended to support research and extension activities. NIFA competitive awards resulted in another $4.2M for KSU in FY2022.
- **HBCU Funding**: HBCU Title III Part B funds are formula- based awards that can be used for a variety of activities, including equipment, library materials, and STEM program purchases. This funding source exceeded $2.9M in FY2022. KSU also received over $900k in FY2022 to support Master's program scholarships.

Despite limited net revenue from PhD level enrollments, new competitive grant funding could be a quantitative benefit resulting from the additional research generated. This could produce a flywheel effect as program faculty use grants to fund new equipment, graduate assistantships, etc. and conduct more research. Based on KSU estimates, new competitive grant funding resulting from the PhD in Integrated Agroecology program could be $1.5M or more per year.

Notes: 1) Education & General (E&G); 2) Moderate totals based on KSU proposal, with conservative estimates developed using assumptions outlined previously; 3) Conferrals will be lower under the conservative model due to lower starting enrollment and higher rates of attrition; 4) US Department of Agriculture, National Institute for Food and Agriculture (NIFA); 5) Historically Black Colleges and Universities. Sources: KSU Proposal and Follow-Up Materials; US Department of Agriculture, NIFA Grant Funding Dashboard; US Department of Education, Master's Degree Programs at Historically Black Colleges and Universities; US Department of Education, Title III Part B, Strengthening Historically Black Colleges and Universities Program.

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Financial Model | Moderate Projection

The operating results[1] in the moderate scenario represents the most likely scenario with many estimates provided directly by KSU.

Budget - Moderate Scenario	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Enrollment	-	15	20	20	15	19
Revenues:						
Tuition & Fees	-	185,831	252,376	257,424	116,497	221,222
Fellowships (Graduate Scholarships - HBCU Masters)	-	(56,650)	(115,566)	(117,877)	(80,156)	(138,991)
Net Tuition Revenue	$ -	$ 129,181	$ 136,811	$ 139,547	$ 36,341	$ 82,231
Total Operating Revenues	$ -	$ 129,181	$ 136,811	$ 139,547	$ 36,341	$ 82,231
Operating Expenses:						
Personnel						
Faculty Salaries	-	-	-	180,000	377,064	377,064
Staff Salaries	58,500	61,273	64,177	67,219	70,405	73,743
Employee Benefits	23,400	24,509	25,671	98,888	178,988	180,323
Start-up Packages	-	-	-	40,000	80,000	80,000
Graduate Assistants	-	600,000	800,000	800,000	600,000	760,000
Other OpEx						
Program Development and Curriculum Design (e.g., consulting services)	50,000	-	-	-	-	57,124
Student Support (e.g., health insurance, travel, training)	-	102,700	105,473	108,321	111,245	114,249
Marketing	20,000	-	-	-	-	-
Other Operating Expenses (e.g., software, supplies)	30,000	5,135	5,274	5,416	5,562	5,712
Facilities Expense	-	-	-	-	-	-
Total Operating Expense	$ 181,900	$ 793,617	$ 1,000,595	$ 1,299,844	$ 1,423,265	$ 1,648,215
Net Surplus/(Deficit) - Before Internal Reallocations	$ (181,900)	$ (664,436)	$ (863,784)	$ (1,160,296)	$ (1,386,924)	$ (1,565,984)
Internal Reallocations						
Grants & Contracts - includes HBCU Title III, HBCU Title VII, Land Grant Evans-Allen Funds and State Match	151,900	659,301	858,510	934,880	924,298	1,103,207
E&G Funds	30,000	5,135	5,274	225,416	462,626	462,776
Total Internal Reallocation	**181,900**	**664,436**	**863,784**	**1,160,296**	**1,386,924**	**1,565,984**
Net Surplus/(Deficit) - After Internal Reallocations	$ -	$ -	$ -	$ -	$ -	$ -

Key Takeaways

- **International Enrollment Provides Limited Revenue[2]:** Due to KSU's intention to only provide graduate fellowships to domestic students, the PhD in Integrated Agroecology is projected to generate between $36k and $140k in fee revenue and tuition revenue from international students in the first five years of enrollment.
- **Largest Expenses Due to Graduate Assistantships, Faculty Salary/Benefits:** KSU intends to leverage seven existing faculty in the early years of the program, curbing net new personnel investments, but four faculty hires across years 3 and 4 will result in an additional $527k in annual faculty salary and benefits expenses. Graduate assistantships, the largest single expense driver, range from $600k to $800k annually.
- Although the program is net negative before internal reallocations (~$1.5M in FY2031), **KSU's total annual investment is relatively small.** Additionally, availability of **land-grant and HBCU funding reduces share of internal reallocations** necessary from E&G funds.

Notes: 1) Assumptions detailed earlier in this section of the report on Slide 147. 2) Faculty-generated competitive grant funding is not included in the projections above as the assumption is that new grant funding will largely be used to fund new research rather than PhD program operations. Sources: IPEDS Data Center; KSU Office of Sponsored Programs FY2023 Annual Report; KSU Proposal & Follow-Up Materials; KSU Tuition and Fees; US Bureau of Labor Statistics Consumer Price Index for All Urban Consumers.

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Financial Model| Conservative Projection

The operating results[1] in the conservative projection represents the financial impact of a "worst case" scenario.

Budget - Conservative Scenario	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Enrollment	-	12	16	16	11	15
Revenues:						
Tuition & Fees	-	148,665	201,901	205,939	88,029	175,946
Fellowships (Graduate Scholarships - HBCU Masters)	-	(45,320)	(92,452)	(94,301)	(64,125)	(110,375)
Net Tuition Revenue	$ -	$ 103,345	$ 109,449	$ 111,638	$ 23,904	$ 65,571
Total Operating Revenues	$ -	$ 103,345	$ 109,449	$ 111,638	$ 23,904	$ 65,571
Operating Expenses:						
Personnel						
Faculty Salaries	-	-	-	180,000	380,664	380,664
Staff Salaries	58,500	61,858	65,409	69,163	73,133	77,331
Employee Benefits	23,400	24,743	26,163	99,665	181,519	183,198
Start-up Packages	-	-	-	46,000	92,000	92,000
Graduate Assistants	-	480,000	640,000	640,000	440,000	600,000
Other OpEx						
Program Development and Curriculum Design (e.g., consulting services)	50,000	-	-	-	-	57,124
Student Support (e.g., health insurance, travel, training)	-	104,000	108,160	112,486	116,986	121,665
Marketing	20,000	-	-	-	-	-
Other Operating Expenses (e.g., software, supplies)	30,000	5,200	5,408	5,624	5,849	6,083
Facilities Expense	-	-	-	-	-	-
Total Operating Expense	$ 181,900	$ 675,801	$ 845,140	$ 1,152,939	$ 1,290,151	$ 1,518,066
Net Surplus/(Deficit) - Before Internal Reallocations	$ (181,900)	$ (572,456)	$ (735,691)	$ (1,041,301)	$ (1,266,246)	$ (1,452,495)
Internal Reallocations						
Grants & Contracts - includes HBCU Title III, HBCU Title VII, Land Grant Evans-Allen Funds and State Match	151,900	567,256	730,283	809,677	787,733	973,748
E&G Funds	30,000	5,200	5,408	231,624	478,513	478,747
Total Internal Reallocation	181,900	572,456	735,691	1,041,301	1,266,246	1,452,495
Net Surplus/(Deficit) - After Internal Reallocations	$ -	$ -	$ -	$ -	$ -	$ -

Key Takeaways

- **Lower Enrollment Contributes to Reduced Revenue in Conservative Scenario**: Lower estimated enrollment and graduation rates reduces already small operating revenues.[2]
- **Lower Expenses in Conservative Scenario due to Fewer Graduate Assistantships**: Despite incorporating higher annual increases for personnel and other operating expenses, the smaller number of graduate assistantships to be funded in the conservative model results in lower overall expenses, ranging from around ~$182k in Year 0 to over $1.5M in Year 5. By comparison, Year 5 expense totals in the moderate scenario are over $1.6M.
- **Under the conservative model, the program is net negative before internal reallocations (over $1.4M in FY2031).** However, as in the moderate scenario, availability of land-grant and HBCU funding offset the amount of E&G funds that must be reallocated to support the program.

Notes: 1) Assumptions detailed earlier in this section of the report on Slide 147; 2) Faculty-generated competitive grant funding is not included in the projections above as the assumption is that new grant funding will largely be used to fund new research rather than PhD program operations. Sources: IPEDS Data Center; KSU Office of Sponsored Programs FY2023 Annual Report; KSU Proposal and Follow-Up Materials; KSU Tuition and Fees; US Bureau of Labor Statistics Consumer Price Index for All Urban Consumers.

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Qualitative Benefits of Proposed PhD Program

A PhD in Integrated Agroecology and Sustainable Agriculture requires strategic financial investment by Kentucky State University but would potentially provide a variety of benefits for both KSU and the Commonwealth.

Service to Small and Minority Kentucky Farmers

Kentucky State stakeholder interviews indicated that the **PhD in Integrated Agroecology will embrace an interdisciplinary approach, with a special focus on sustainability and data analytics, in order to better serve small and medium sized farms that may have less access to specialized, data-informed approaches** than large-scale farms. In 2022, there were 43,200 farms in Kentucky with sales between $1,000 and $9,999. The average Kentucky farm size was 176 acres in 2022.

Strengthened Alignment with Land-Grant Mission

Due to the students enrolled and research produced in an agricultural-oriented field, **the PhD in Integrated Agroecology will further contribute to KSU's ability to deliver on its mission** as an 1890 Land-Grant institution. These institutions were established **to expand agricultural and technical education and access to such education.**

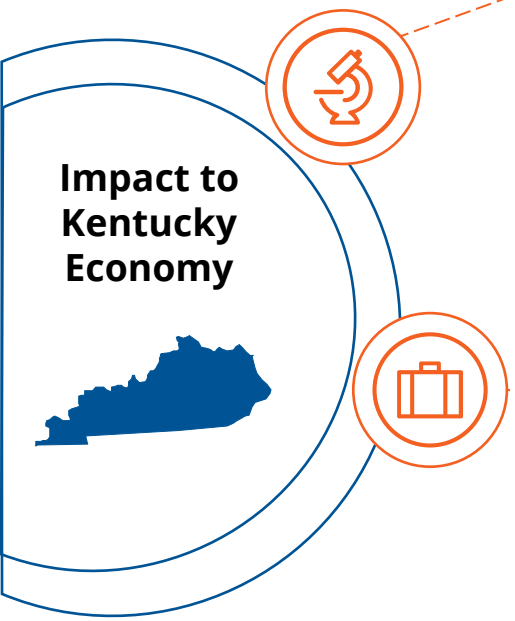
Promotes Interdisciplinary Programming, Resource Sharing

Kentucky State stakeholder interviews indicated that the PhD in Integrated Agroecology will embrace an interdisciplinary approach, which enables the institution to leverage existing faculty and facilities**, limiting additional financial investment required to launch the program**. Additionally, interdisciplinarity **equips graduates for the workforce by developing skills and expertise across a variety of areas** (e.g., data analytics, sustainability best practices).

Sources: Association of Public & Land-Grant Universities; Kentucky Agricultural Statistics 2023 Annual Bulletin; KSU stakeholder interviews and proposal materials.

Potential Economic Impact of PhD in Integrated Agroecology

Primary economic impacts from a PhD in Integrated Agroecology are likely to result from agricultural innovations and emerging practices implemented by Kentucky farmers as a result of research conducted by program faculty and PhD candidates.



Agricultural Innovation from Program Research

As a research doctoral program, the PhD in Integrated Agroecology is likely to result in growth in agriculture and sustainability research at KSU and probable trickle-down effects to the Kentucky economy as this research is disseminated and translated into innovative practices.

According to the USDA, benefits from agriculture research & development investment is the "primary driver of long-term productivity growth in U.S. agriculture" and leads to "improvements in natural resources and forestry management, helps advance rural development, enhances food safety and quality, and informs markets and policy."

70%

Share of U.S. public agricultural research conducted by land-grant universities and other non-Federal institutions

20x

Estimated average benefit to economy from spending on public agricultural research in the U.S.

Minor Regional Workforce Inflow

In its first five years, the PhD in Integrated Agroecology is expected to draw four new faculty hires, so direct impacts to the Frankfort economy from new jobs will be minimal.

There is potential that, in the medium-to-long term, there could be an increase in the Kentucky workforce resulting from any program graduates that elect to work in Kentucky, either in academia or the agriculture industry. However, at least in the early years, this impact will be likely be lower due to the high number of international students, who are likely to return to their country of origin after completion of the program and any subsequent visa extensions due to post-graduate work initiatives (e.g., STEM Optional Practical Training (OPT)).

Sources: Investment in U.S. Public Agricultural Research and Development Has Fallen by a Third Over Past Two Decades, Lags Major Trade Competitors; KSU interviews, proposal, and related materials.

Student Demand

Overall Feasibility Assessment

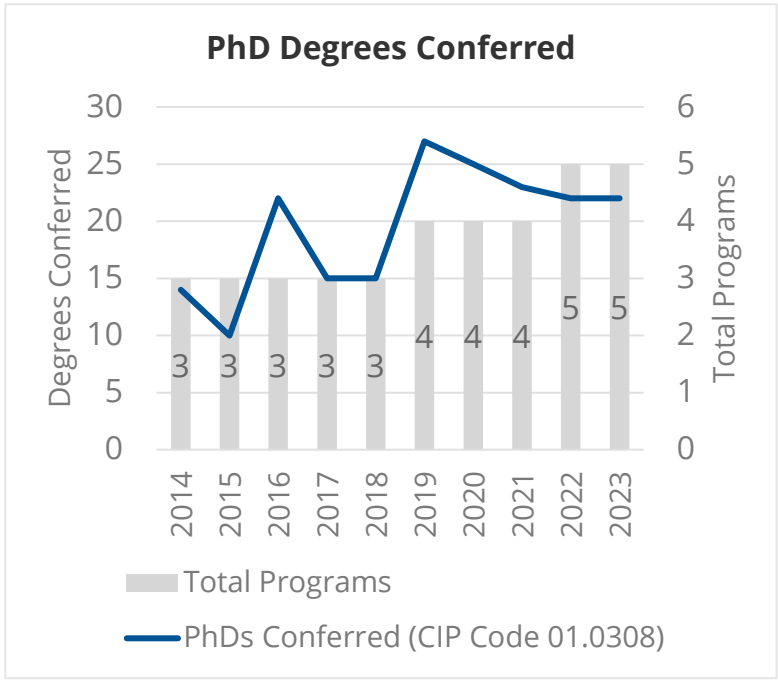
Student Demand 	G	PhD in Integrated Agroecology capitalizes on institutional strengths, both in enrollment pipeline and strategic alignment between agriculture and land-grant status. Enrollment in KSU's School of Agriculture & Natural Resources grew by 112% from 2019 to 2023.

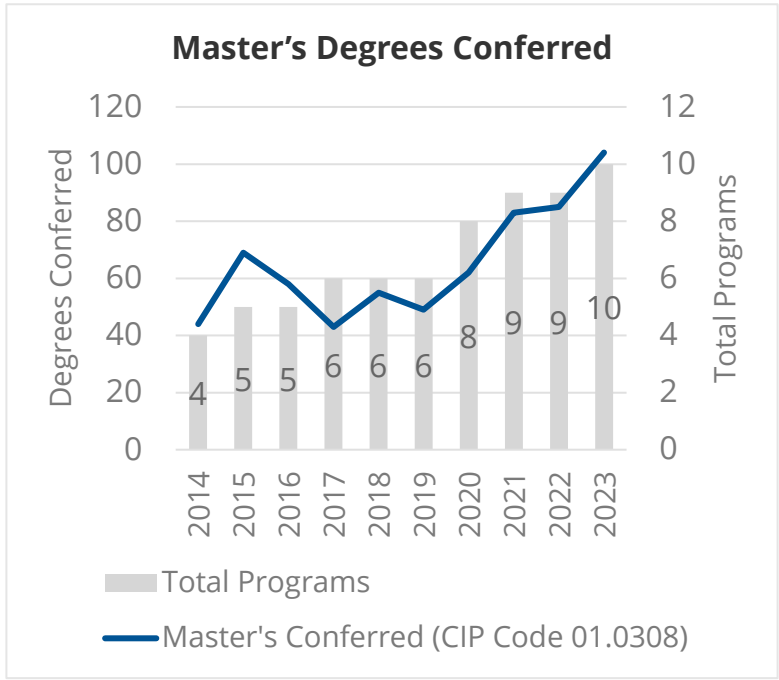
KSU | PHD IN INTEGRATED AGROECOLOGY

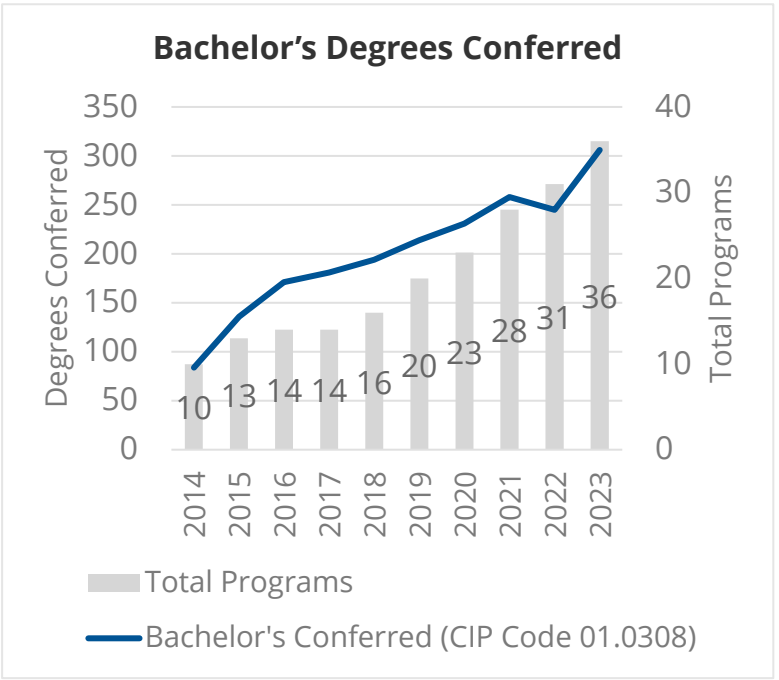
Agroecology and Sustainable Agriculture | Student Demand Overview

KSU's proposed PhD program focuses on a niche academic discipline with a small but growing number of degree conferrals nationally.

KSU's proposed program will fall under CIP Code 01.0308: Agroecology and Sustainable Agriculture. Degree conferrals and program data was sourced from IPEDS using this CIP Code.







Growth in **Degree Conferrals**, 2014-2023	**57%**	**136%**	**264%**
Growth in **Total Programs**, 2014-2023	**67%**	**150%**	**260%**

Source: IPEDS Data Center.

Competitive Landscape for Agroecology & Sustainable Agriculture Programs

The national landscape for agroecology PhD programs highlights the prevalence of land-grant institutions and the unique nature of the program.

Agroecology and Sustainable Agriculture PhD Programs (2024)[1]

Important Considerations

Peer Similarities

Four out of five of the PhD programs are located at land-grant institutions (all except Southern Illinois University-Carbondale). North Carolina A&T, which launched the newest program, is also an HBCU, making it a strong peer to Kentucky State.

Niche Program

The small market for Agroecology and Sustainable Agriculture PhDs is due in part to its niche subject. While many other schools study the subject, it is typically the “focus” or “concentration” of a broader degree in agricultural and environmental sciences.

Master’s Program Pipeline

Six out of ten of the Master’s programs in Agroecology and Sustainable Agriculture are located at land-grant institutions, highlighting the natural alignment of programs in this discipline with the land-grant mission.

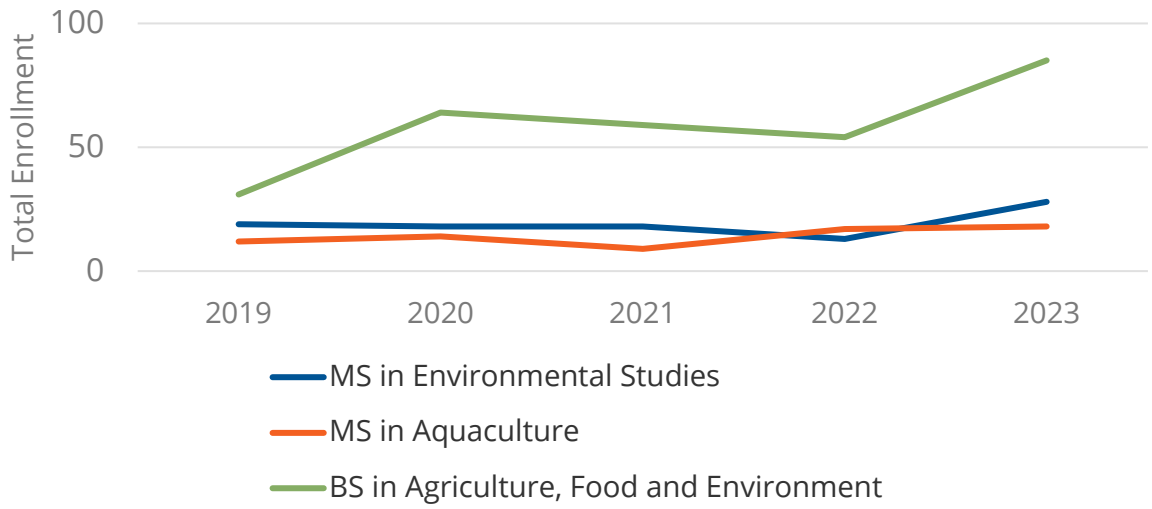
Note: 1) programs identified using CIP Code 01.0308: Agroecology and Sustainable Agriculture. Source: IPEDS Data Center.

KSU | PHD IN INTEGRATED AGROECOLOGY

Student Demand for Agroecology at Kentucky State University

The proposed PhD program aligns with KSU's internal enrollment strengths and internal reports point to a solid enrollment pipeline.

Enrollment in Feeder Programs



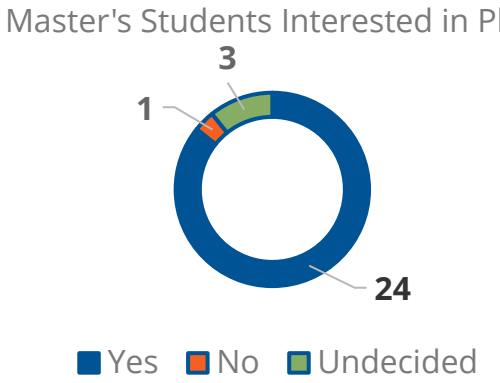
Feeder Programs Are Growing

- The primary feeder programs for KSU's proposed PhD, **the MS in Environmental Studies and the MS in Aquaculture**, **grew by 47% and 50%** respectively from 2019 to 2023, and KSU is projecting continued growth in 2024.
- Enrollment in the School of Agriculture & Natural Resources **grew by 112%** from 2019 to 2023.
- Agriculture, Food and the Environment (AFE) was the fastest growing major at Kentucky State from 2019 to 2023.

Enrollment Pipeline for Agroecology PhD

- Kentucky State views **students in their current master's programs,** specifically the MS in Environmental Studies and the MS in Aquaculture, as the **primary enrollment pipeline** for the PhD in Integrated Agroecology.
- According to KSU's data, approximately **34% of Environmental Studies master's students and 22% of Aquaculture master's students go on to pursue doctoral degrees**.
- Although external recruitment is secondary to internal, KSU is also planning to hire a recruiter solely for the College of Agriculture.

Results of KSU Internal Survey on Current Graduate Student Interest in a PhD in Agroecology[1]



- 24 out of 28 respondents were interested in the proposed PhD program.
- At least ten of the affirmative respondents will graduate by Spring 2025, and another ten by Winter 2025.

Note: 1) Survey conducted internally by KSU in June 2024 among current graduate students to gauge potential interest in a "PhD in Agroecology and Sustainable Agriculture blended with Data Science to be launched in Fall 2025". Sources: KSU Cursory Enrollment by Program provided by CPE, KSU data on MES/Aquaculture Graduates completed/pursuing doctoral degree, KSU proposal, and other related materials.

Workforce Alignment

Overall Feasibility Assessment

Workforce Alignment

G

PhD in Integrated Agroecology aligns with Kentucky employment in Agriculture industry. The PhD program prepares students for industry employment (direct workforce impact) as well as academia (indirect workforce impact via research and innovation).

PhD in Integrated Agroecology Workforce Alignment

KSU has designed the proposed PhD in Integrated Agroecology and Sustainable Agriculture to prepare graduates for careers in both academia and industry.

PhD in Integrated Agroecology Suited to Both Aspiring Academics and Agriculture Practitioners

Academia

Similar to the majority of research PhD programs, KSU articulates that their graduates will primarily be candidates for employment in higher education. Academic jobs will benefit Kentucky by training the next-generation of experts and conducting important research and extension work.

Industry

Graduates of the program may also go into industry to work as research scientists, policy analysts, and specialists. The program's training will prime graduates to work in increasing agricultural efficiency and sustainability, ultimately benefiting the greater Kentucky community.

Integrated Agroecology PhD Graduates Will be Prepared To:

Strengthen Extension Services:

The existing Kentucky State University Cooperative Extension Program (KSUCEP) provides research-based education to underserved farmers. Integrated Agroecology PhD students and their research will augment the support provided to small, local farmers.

Develop and Distribute Innovative Practices:

By integrating data sciences and advanced technology in research and practice, students will graduate prepared to tackle modern complex agricultural and environmental problems in an increasingly multi-disciplinary industry.

Promote Global Sustainability:

The UN's Food and Agriculture Organization highlights agroecology as "the heart of the 2030 Agenda for Sustainable Development." KSU's network of international partnerships and students will support sustainability within Kentucky and beyond.

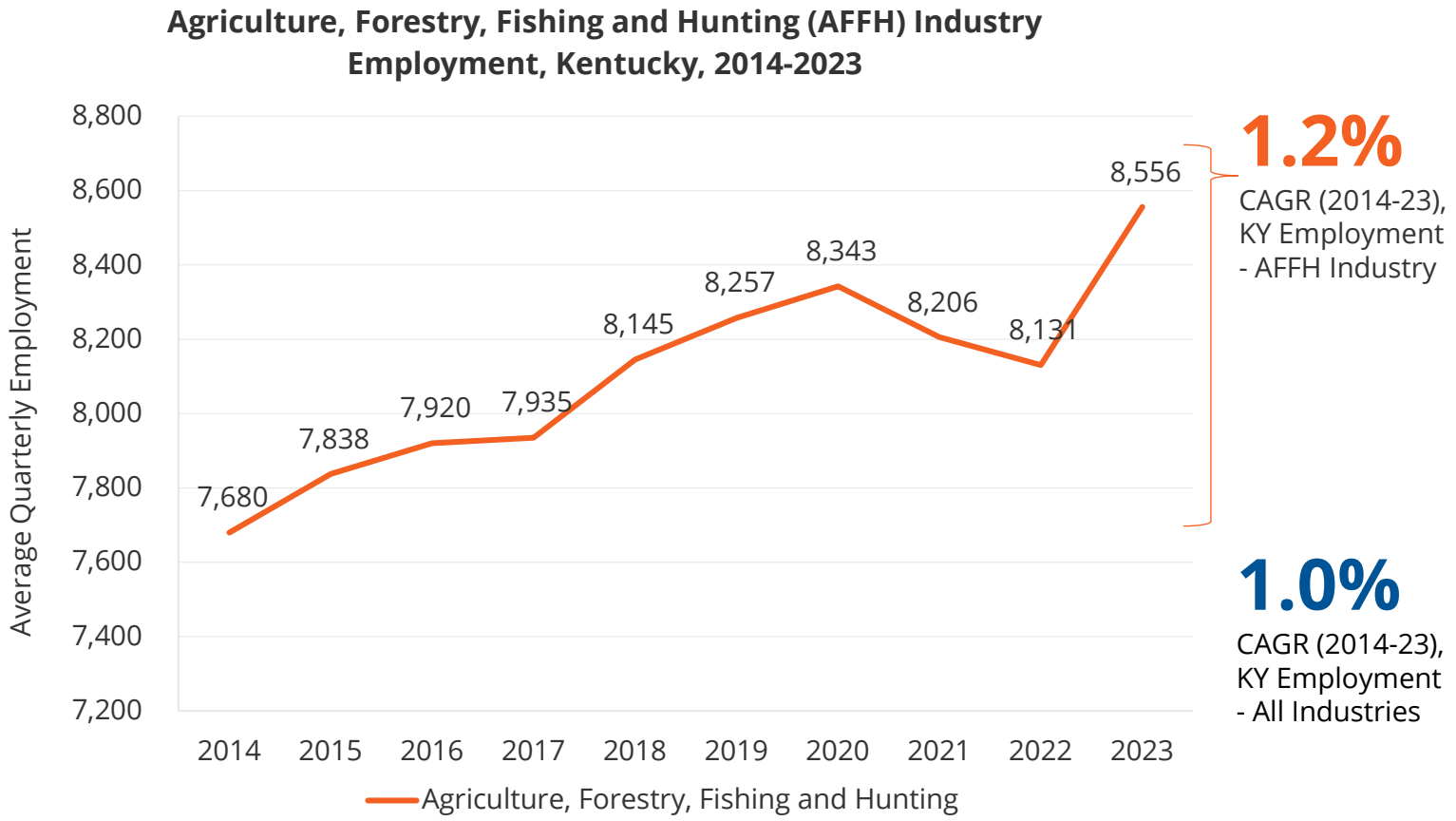
Sources: KSU stakeholder interviews and proposal materials; Kentucky State University | Cooperative Extension; Overview | Agroecology Knowledge Hub | Food and Agriculture Organization of the United Nations.

KSU | PHD IN INTEGRATED AGROECOLOGY

Kentucky Employment in Agriculture Industry

Although a relatively small industry in terms of employment, agriculture industry employment is growing, indicating promising opportunities for graduates of KSU's program and alignment with Kentucky workforce needs.

Growing Employment In Agriculture Industry



Key Takeaways

Small Industry Employment, but Large Footprint

Agriculture, Forestry, Fishing and Hunting (AFFH) is a small industry in terms of employment. AFFH employment represents roughly 0.4% of total Kentucky employment. However, this represents a fairly large footprint, with over $8 billion in market value from agriculture product sales and 69,000 farms across 12.4M acres within Kentucky as of 2022.

Growing Employment Demand

Despite facing declines in 2020-22 likely related to the COVID-19 pandemic, employment in AFFH has been growing. With a 1.2% CAGR since 2014, the industry is slightly outpacing overall employment growth in Kentucky.

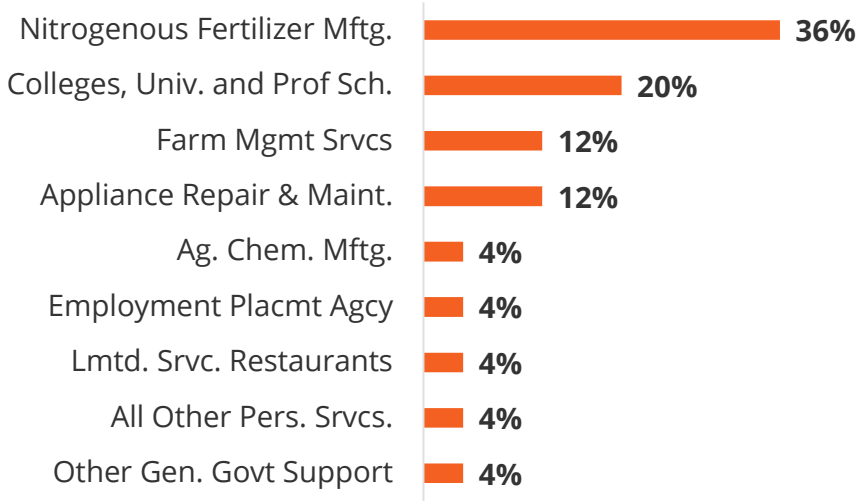
Sources: Kentucky Center for Statistics Employment and Wages by Industry; USDA 2022 Census of Agriculture.

KSU | PHD IN INTEGRATED AGROECOLOGY

Integrated Agroecology PhD Holder Job Outcomes within Kentucky

Analysis of resumes, including social media websites, job boards, and job posting sites, identified 25 individuals within Kentucky with agroecology-related doctoral degrees. These graduates were employed in roles across the agriculture industry as well as academia.

Top Sub-Industries as % of Total



20% of Kentucky residents with agroecology and related doctoral degrees work in the Colleges, Universities, and Professional Schools sub-industry, which lends support to KSU's intent to prepare graduates for careers in academia as well as the broader agricultural industry.

Top Job-Titles as % of Total

Within Kentucky, agronomists, agricultural specialists, and extension agents rank within the top job titles for graduates of agroecology doctoral programs.

Note: 1) Based on public profiles for 25 PhD in Agroecology graduates located in Kentucky; Source: Deloitte Labor Market Intelligence™

Faculty Recruitment

Overall Feasibility Assessment

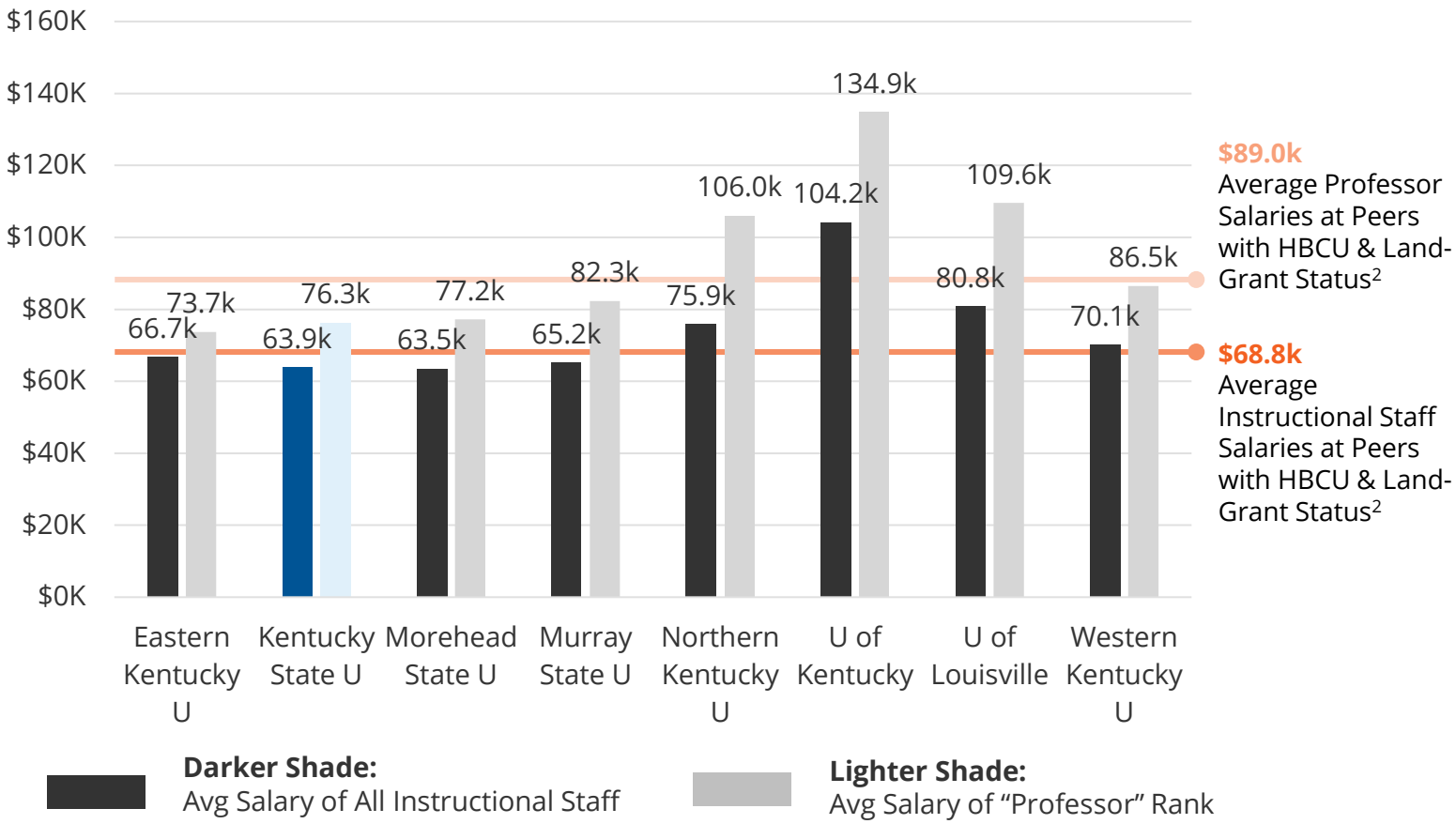
Faculty Recruitment	G	The relatively small number of planned faculty hires (four by Year 5) limits faculty recruitment risks. Proposed salaries exceed average faculty salaries at peer colleges and universities, which may further ease recruitment and hiring.

KSU | PHD IN INTEGRATED AGROECOLOGY

KSU Faculty Recruitment Considerations

While Kentucky State's average instructional salaries in AY2022-23 were lower than both Kentucky and HBCU/Land-Grant Peers, the proposed hiring rate for PhD in Integrated Agroecology is $90,000 – well above averages for both sets of peers.

Average Salaries of Full-Time Instructional Nonmedical Staff equated to 9-Months Worked, by Academic Rank: Academic Year 2022-23[1]



Key Takeaways

- **Kentucky State's wages for all Instructional Staff and Professors fall below the average for Kentucky comprehensives and for peers with HBCU & Land-Grant status**, with wages for Instructional Staff higher than just one Kentucky four-year public (Morehead State) and seven of twenty-one HBCU/Land-Grant peers.
- **Salaries are well below University of Kentucky and University of Louisville, each within 40 miles of KSU**, but **competition for faculty with these institutions may be limited** given the different institutional classifications, missions, and enrollment sizes.
- KSU's **ability to recruit faculty is bolstered by the higher-than-average salaries proposed** for new Integrated Agroecology PhD program hires ($90,000). Care should be taken to ensure program hiring does not result in internal equity concerns.

Notes: 1) Reflects IPEDS "All instructional staff total of Average salaries of full-time instructional nonmedical staff equated to 9-months worked, by academic rank : Academic year 2022-23;" 2) See Appendix for full list of HBCU & Land-Grant Peers; Sources: IPEDS Data Center; KSU proposal and related materials.

Accreditation Requirements

Overall Feasibility Assessment

Accreditation Standards		
	G	Approval of the PhD in Integrated Agroecology will require review and approval by SACSCOC under the Substantive Changes process.

Relevant SACSCOC Accreditation Requirements

A PhD in Integrated Agroecology would require approval by SACSCOC, KSU's accrediting body, as it is a new program and results in a substantive change to the institution.

Substantive Change Policy

- SACSCOC requires review of "Substantive Change," which includes anything that involves significant modification or expansion of the nature and scope of an accredited institution, particularly those deemed high-impact, high risk, or with potential to impact educational quality.
- If KSU's proposal to launch a PhD in Integrated Agroecology is approved, KSU will need to follow the Substantive Change process for "New Program – Approval," as 50-100% new content is a significant departure from the institution's existing programs.[1]

New Program Approval Process and Deadlines

Submission Elements:

KSU will need to submit the following to receive necessary approval from the Executive Council of the SACSCOC Board of Trustees to launch a new doctoral research program:

- Fee
- Prospectus[2]

Submission Deadlines:

- For changes to be Implemented July 1-December 31: **January 1**
- For changes to be implemented January 1-June 30: **July 1**

Notes: 1) KSU is presently on warning[1] with SACSCOC due to failure to comply with the "Principles of Accreditation". KSU's accreditation status is set to be reviewed in Dec. 2024 by the SACSCOC Board of Trustees. As KSU is on *substantive change restriction* (an institution that has been placed on warning, probation, or probation for good cause), approval would be required at a lower threshold as well (25%-100% new content); 2) A list of required prospectus elements can be found in the Appendix. Sources: SACSCOC Substantive Change Policy and Procedures.

Academic Program Approval | Policy and Process Recommendations

Legislative Overview and Recommendations

Roles & Responsibilities of CPE, KY General Assembly, and Accreditation Bodies

Kentucky Council on Postsecondary Education (CPE), Kentucky's General Assembly, and Accreditation Bodies carry out different responsibilities to regulate and support KY public universities and the Kentucky Community and Technical College System.

Kentucky General Assembly

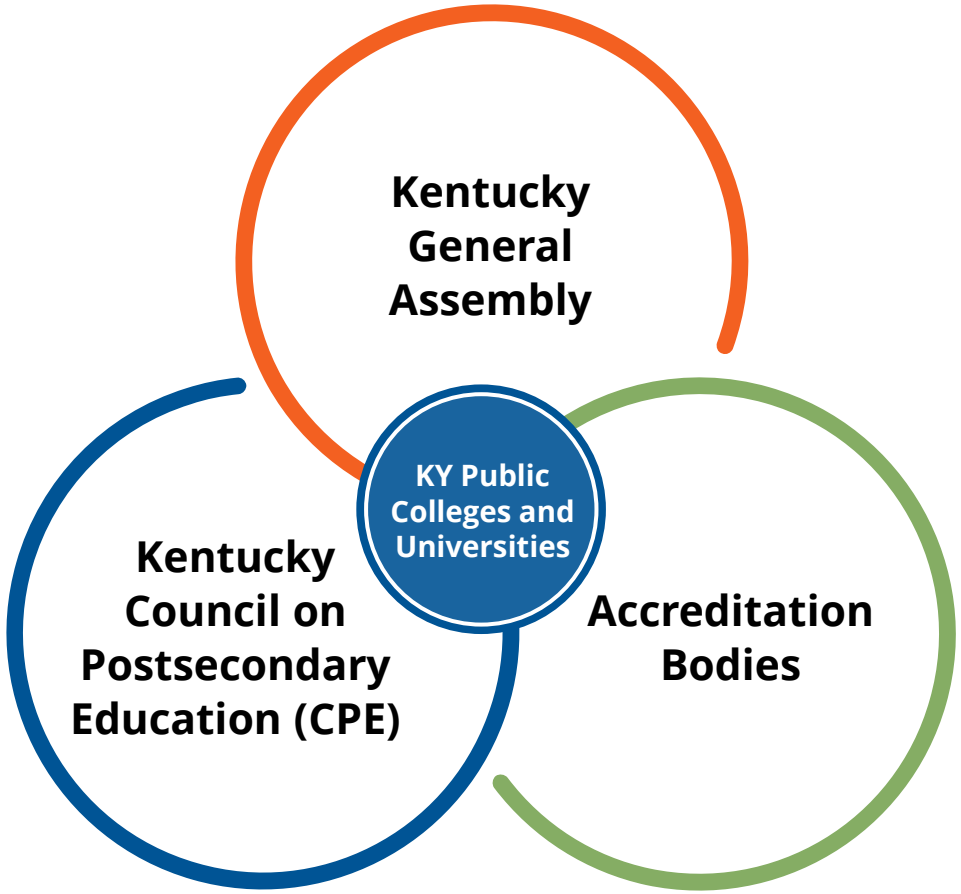
The Kentucky General Assembly passes legislation that establishes, regulates, and supports public colleges and universities. The General Assembly is also responsible for approving state appropriations to schools and appointing members of the CPE board.

Kentucky Council on Postsecondary Education

Established in its current form by the Postsecondary Education Improvement Act of 1997, CPE is the coordinating body for Kentucky's public colleges and universities. CPE facilitates a positive return on investment of public funds supporting higher education by monitoring academic quality, affordability and student success through policy and accountability measures. CPE's sixteen-member board is supported by an attached state agency; the state agency is led by a president appointed by the General Assembly, who also serves as an advisor to the General Assembly.

Accreditation Bodies

Kentucky universities are required to comply with standards set by accreditation bodies. All public KY universities are accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC), while programs in certain disciplines (e.g., osteopathic medicine, veterinary medicine) have their own accreditation bodies.



Sources: About the Council: Who We Are - Ky. Council on Postsecondary Education.

Relevant Powers & Duties of CPE

Denotes duties and responsibilities related to the scope of SJR 170

To ensure a well-coordinated and efficient public postsecondary education system, CPE's statutory duties outlined by KRS 164.020 include, among other duties, overseeing the strategic agenda, leading the budget process, and approving academic programming.

CPE | Select Relevant Duties & Responsibilities (Representative, Not Exhaustive)

Strategic Agenda

"Develop and implement the strategic agenda… Revise the strategic agenda and strategic implementation plans based on the strategic agenda…"

Budget & Funding Model

"Lead and provide staff support for the biennial budget process as provided under KRS Chapter 48, in cooperation with the committee…"

Academic Programming

"Define and approve the offering of all postsecondary education…degree, certificate, or diploma programs in the public postsecondary education institutions…Eliminate, in its discretion, existing programs or make any changes in existing academic programs…"

Tuition & Admissions

"Determine tuition and approve the minimum qualifications for admission to the state postsecondary educational system."

Institutional Missions

"Review, revise, and approve the missions of the state's universities and the KCTCS… [CPE] shall have the final authority to determine the compliance of postsecondary institutions with their academic services, and research missions."

Policy Guidance

"Devise, establish, and periodically review and revise policies to be used in making recommendations to the Governor for consideration in developing recommendations to the General Assembly for appropriations to the universities…"

Technology Management

"Ensure the coordination, transferability, and connectivity of technology among postsecondary institutions…including the development and implementation of a technology plan as a component of the strategic agenda."

Data Analysis

"Engage in analyses and research to determine the overall needs of postsecondary education and adult education in the Commonwealth."

Sources: About the Council: Who We Are - Ky. Council on Postsecondary Education, The Council's Role and Responsibilities (Handout), KRS 164.020.

KRS 164.295: History of Statutes Governing Comprehensive Universities

The legislation created in the Kentucky Postsecondary Education Improvement Act has been amended several times across the past two decades to incrementally expand the scope of comprehensive universities.

Each Senate Bill Amends KRs 164.295

1997

Kentucky Postsecondary Education Improvement Act

Included **KRS 164.295** which outlined which programs the six comprehensive state universities could provide, including **graduate programs with CPE's approval.**

2010

SB 127

Allowed comprehensive universities to offer **advanced practice doctoral (APD) degrees in nursing.**

2011

SB 130

Permitted comprehensive universities to offer up to **three APD degree programs** and an **Ed.D program,** specifying that comprehensive universities are **not allowed** to offer "first professional degrees" in medicine.

2012

SB 131

Removed the limit of three APDs and one Ed.D at individual institutions and set **a maximum of eighteen total advanced practice doctorates and Ed.Ds** for the six comprehensive universities, with at least two available for each institution.

2017

SB 147

Removed the cap of eighteen total APDs and Ed.Ds for comprehensive universities. Also removed "first professional degree" language and changed it to **doctoral degrees "required for professional practice and licensure..."** in fields including medicine and veterinary medicine.

These incremental changes to KRS 164.295, driven by individual institutions' interest in expanding program offerings, have **blurred the lines between the missions of higher education institutions in Kentucky** (research vs. comprehensive), contributed to an **unpredictable strategic environment**, and **created confusion around roles and responsibilities** for program review and approval at public institutions in Kentucky.

Sources: KRS 164.295; Chapter 80 (SB 127); CHAPTER 94 (SB 130); CHAPTER 29 (SB 131); CHAPTER 51 (SB 147, Givens and Wilson).

Legislative Recommendations

Legislative changes may be necessary to address the outcomes of the SJR 170 study. Moreover, the coordinating entity (CPE) should continue to be empowered to review and approve academic program decisions in the future, consistent with statute and in alignment with leading practices.

Clarify the Missions of Public Institutions in Statute *(SJR 170 Outcomes Dependent)*

- The missions of KY's public institutions may need to be reconsidered based on not only the outcomes of SJR 170, but also the changing nature of higher education in KY and the US more broadly.
- Statutory language should broadly set the mission for each institution, clarifying its place in the commonwealth, particularly with regards to research and doctoral programs, providing each institution with clarity, differentiation, and opportunities to innovate.

Ensure that the Coordinating Entity (CPE) is empowered to carry out its statutory role of defining and approving all academic programs

- With statute broadly defining mission for each institution, CPE should continue to be empowered to efficiently and effectively approve individual program proposals, as statute dictates.
- A clear separation of duties between the legislature and the coordinating entity is leading practice across US public higher education.
- The coordinating entity should be funded at a level that allows them to carry out their statutory responsibilities.

Sources: KRS 164.295 Programs of state and comprehensive universities -- Criteria for approval of advanced practice doctoral programs -- Review of doctorates -- Degrees a comprehensive university may not offer; KRS 164.020 Powers and duties of council.

Process Overview and Recommendations

New Academic Program Review and Approval Process | Current State

Per KRS 164.020, CPE has statutory responsibility to "define and approve the offering of all postsecondary…programs in the public postsecondary education institutions."

CPE New Academic Program Approval Process[1] (High-Level Summary | Current State)

All University Degree Programs Except Advanced Practice Doctorates (APDs) at Comprehensive Universities

Notification of Intent	Proposal	Response & Review	Council Approval
Institutions **submit a Notification of Intent (NOI)** through CPE's online system. The notification is shared with chief academic officers at other public institutions.[2]	If no issues are identified, the proposing institution then **submits a full proposal** within one year. *See next slide for new program approval form questions.*	**Other KY public institutions and CPE staff have 30 days** to post questions or concerns about the proposal. If CPE identifies issues, the review period is extended, and CPE works with the proposing institution to resolve the issue (rather than denying proposal outright).	Once any issues are resolved, the proposal is sent to the Council for approval. If identified issues cannot be resolved, CPE staff informs the institution to stop any internal program approval processes.

APDs[3] at Comprehensive Universities

Pre-Proposal	Response Period	Proposal	CPE Review	Council Approval
Institutions **submit a Pre-Proposal** through CPE's online system.	**Other institutions and CPE staff have 30 days** to review and comment. If CPE requests additional information, the proposing institution must comply within 30 days.	If issues are resolved and CPE pre-approves the program, the proposing institution must **submit a full proposal** within six months. *See next slide for program approval form questions.*	If the full proposal meets the administrative requirements in 13 KAR 2:110, CPE staff recommend the program for approval.	The council either approves the program or denies the program and identifies deficiencies to be corrected in a revised proposal submitted within 90 working days.

Notes: 1) A separate approval process governs new academic program review at KCTCS and can be found in CPE's New Academic Program Policy; 2) An additional step involving KCTCS exists for associate degree programs; 3) Advanced Practice Doctorates. Sources: Kentucky Council of Postsecondary Education New Academic Program Policy and New Academic Program Approval Form; KRS 164.020; Kentucky Title 013, Chapter 002, Regulation 110.

New Program Approval Form Questions

CPE's new program approval form contains five sections of questions (with supplemental questions for APDs); the list below is not an exhaustive list of the questions asked.

Overview of CPE's New Program Approval Form

Centrality to the Institution's Mission and Consistency with State's Goals

- Provide brief description of the program with its estimated date of implementation
- Describe the rationale and need for the program to include how the institution determined need

Cost and Funding of the Proposed Program

- The resource requirements and planned sources of funding of the proposed program must be detailed in order to assess the adequacy of the resources to support a quality program
- Includes description of available financial resources, projected revenues and expenditures, resources for contractual support or support services

Program Review and Assessment

- Plans to evaluate students' post-graduate success

Program Quality and Student Success

- Provide specific programmatic goals (objectives) and specific student learning outcomes for the program
- Describe how the student learning outcomes for the program will be assessed
- Highlight any distinctive qualities of the proposed program
- Describe admissions and graduation requirements for the program

Program Demand/Unnecessary Duplication

- Provide evidence of student demand
- Project estimated enrollment and degrees conferred for the first five years of the program
- Provide evidence of employer demand (e.g., openings, average wages)
- Provide "a comparison of objectives / focus / curriculum to similar programs, student populations,..., and feedback from other institutions"

Supplemental Questions for APDs:

- Describe how the doctorate builds upon the reputation and resources of the existing master's degree program in the field
- Provide a description of the master's program or programs and note any distinctive qualities of these programs as well as any national recognition bestowed upon the program
- Provide evidence that funding for the program will not impair funding of any existing program at any other public university
- Upload a letter from each institution with a similar program stating that the proposed program will not negatively impact the existing program

Source: CPE New Program Approval Form

New Academic Program Review and Approval Process | Current State

CPE's Process for Review of New Academic Programs has several strengths, including clearly articulated steps for universities to follow related to initial submissions, but some challenges exist related to approval roles and criteria, secondary review timelines, and post-launch monitoring.

Strengths of New Academic Program Approval Process

Transparent Guidance and Accessible Documentation for Initial Steps
The process around initial submissions for new academic program approval is outlined on CPE's website. CPE also provides a variety of supporting resources (e.g., policy guidance, glossary of terms, expense and revenue worksheet) to clarify terms and promote shared understanding.

Balances Innovation with Non-Duplication
The current CPE process provides opportunities for campuses to launch new programs, encouraging innovation and institutional autonomy, while also providing criteria and steps designed to manage duplication amongst CPE institution programs.

Differentiated Process for APD Programs
Current policy differentiates process steps for advanced practice doctorates (APD) at comprehensive universities versus other programs, which streamlines some data reporting requirements, but additional opportunities to tailor reporting requirements or process steps to financial or other strategic thresholds may exist.

Challenges in New Academic Program Approval Process

Confusion in CPE Role and Decision-Making
Frequent changes to KRS 164.295 and resulting changes in approved institutional offerings has led to some confusion about the scope of CPE's role in new program approval.

No External Validation Required for High-Risk Programs
While CPE validates institution-provided data for all new programs, additional review of program proposals by subject matter experts may be needed to mitigate the risk of programs that require significant financial investment or deviate from an institution's historical scope or mission.

Uncertainty Around Criteria for Approving Programs
While university leaders commend CPE for allowing them to provide feedback on new program proposals, they perceive that all programs are ultimately approved regardless of concerns and question how their feedback is factored into approval decisions.

Insufficient Accountability for Program Performance Post-Launch
Once new academic programs are launched, there is currently no separate process for post-launch monitoring of new programs by which CPE monitors and holds programs accountable to original proposal projections, though the review process for existing program remains as a general check-and-balance.

Sources: Stakeholder interviews; Kentucky Council of Postsecondary Education New Academic Program Policy and New Academic Program Approval Form; KRS 164.020; Kentucky Title 013, Chapter 002, Regulation 110.

New Academic Program Review and Approval Process | Benchmarking

The project team reviewed 45 state systems or coordinating bodies' new academic program approval processes and identified leading practices that informed our recommendations for CPE.

Leading Practices in New Academic Program Approval Processes

Differentiated Process Based on Program Criteria

Eighteen systems or coordinating bodies had different processes or forms for a bachelor's vs. doctorate degree program.

Idaho requires different types of proposals based on a program's financial impact >$250k.

New Mexico's new graduate programs must additionally be approved by the Council of Graduate Deans and the State Board of Finance.

Use of External Review

Twenty state systems or coordinating bodies incorporate external review into their program approval process.

In **New Jersey,** new degree programs must be evaluated by an independent external consultant.

All new graduate-level programs in **Oregon** must undergo an external review by qualified experts.

Process Transparency and Clarity

Leading review processes provided transparency and clarity through timelines, clear responsibilities, and evaluation criteria.

UNC has a well-defined timeline detailing when each step occurs and who is responsible for each step.

Illinois clearly outlines approval criteria and provides minimum requirements to receive program approval.

Post-Launch Program Review

Some systems or coordinating bodies hold institutions accountable for new program performance through post-launch reviews.

South Dakota evaluates the enrollment and financial data of new programs annually from Year 2 to Year 6.

During a new program's first productivity review, **South Carolina** completes a more thorough analysis that compares metrics to proposal projections.

Sources: Idaho State Board of Education; New Mexico Higher Education Department; New Jersey Presidents' Council; Oregon Higher Education Coordinating Commission; The University of North Carolina System; Illinois Board of Higher Education; South Dakota Board of Regents; South Carolina Commission on Higher Education.

New Academic Program Review and Approval Process | Recommendations

CPE should adopt the following recommendations to address existing concerns about the academic program approval process and make the process more transparent, equitable, and effective.

Further Differentiate Proposal Requirements

- CPE, guided by statute, currently has three different processes for program review and approval—one for KCTCS, one for advanced practice doctorates, and one for all other degree programs.
- CPE should consider creating an additional differentiated process for programs requiring "extraordinary consideration," **such as those requiring the creation of a new college or school, or those that deviate from an institution's historical scope/mission.**

Consider Requiring External Review

- CPE should consider requiring external review of proposals that **exceed a certain financial threshold, will require significant state support for start-up costs or ongoing operations, and proposals that deviate from an institution's historical scope and mission**.
- These reviews may be conducted by qualified faculty in related disciplines at other institutions outside of the Commonwealth of Kentucky, though CPE should vet reviewers for potential biases.

Clarify Approval Criteria for Programs

- While stakeholders acknowledge the detailed program approval form, **they raise questions around the criteria used in the decision to approve programs.**
- Increased transparency on the overarching process for decision-making may address the stakeholder perception that every program proposal is ultimately approved, regardless of any stakeholder concerns.
- Clear articulation of why program decisions have been made will also increase transparency and stakeholder trust in the process and may ultimately yield higher quality proposals in the future.

Instill Accountability for New Program Performance

- CPE should consider **establishing a post-launch review process for all approved programs**, which would include monitoring the programs' performance on a pre-defined set of performance metrics and agreeing upfront to amending or sunsetting the program if underperformance continues.
- Metrics should be determined in concert with program leadership at the institution and may include enrollment, financial, or research KPIs, depending on the type of program.

Appendix

Appendix | Eastern Kentucky University

EKU Campus Visit

On 9/13/24, the project team visited the Eastern Kentucky University Campus and met with the following stakeholders.

Meeting Time (EST)	**Participants**
President McFaddin (8:30 – 9:30 AM)	• President McFaddin • Colleen Chaney – Chief of Staff, Chief Communication Officer
COM Working Group (10:00 -11:30 AM)	• President McFaddin • Colleen Chaney – Chief of Staff, Chief Communication Officer • Dana Fohl – University Counsel • Tanlee Wasson – Senior Vice President for Student Success, Engagement, and Opportunity) Sara Ziegler – Provost and Senior Vice President for Academic Affairs • Mary Beth Neiser – Vice President of University Development and Alumni Engagement
President's Leadership Council (1:00 – 2:30 PM)	• Carrie Ernst – Chief Innovation and Optimization Officer • Tom Martin – Dean of the College of Business • Dan Hendrickson – Associate Vice President of Student Success, Engagement, and Opportunity • Bryan Makinen – Associate Vice President of Public Safety • Elizabeth Smith – Dean of the College of Education and Applied Human Sciences • Anna Catterson – Executive Officer of EKU Online • Derek Paulsen – Dean of the College of Justice, Safety, and Military Science • Ryan Baggett – Dean of Online Learning, Graduate Education, and Research • Tom Otieno – Dean of the College of Science, Technology, Engineering, and Math • Brian Mullins – Interim Vice President for Finance/Chief Financial Officer (CFO) • Kyle Moats – Vice President and Director of Athletics • Mercy Cannon – Dean of the College of Letters, Arts, and Social Sciences • John Dixon – Chief Human Resources Officer and ADA Coordinator • Jeff Whitaker – Chief Information Officer • Julie George – Dean of Libraries • Mary Beth Neiser – Vice President of University Development and Alumni Engagement • Amy Scarborough – Chief Government, Community and Corporate Relations Officer • John Williamson – Dean of K12 Programs and Superintendent Model Laboratory School • Daniel Czech – Dean of the College of Health Sciences (10/3) • Mackenzie Winkler – Communications Specialist • Sara Zeigler – Provost and Senior Vice President for Academic Affairs (Chief Academic Officer)

EKU External Stakeholders

The project team hosted six virtual meetings with eight leaders from various healthcare organizations in Richmond and the surrounding region.

Stakeholder Group	Meeting Participants
Appalachian Region Hospitals (ARH)	Tammy Allen – Clinical Education Director/GME Administrator
Kentucky Association of Health Care Facilities and Kentucky Care for Assisted Living	Adam Manther – President
White House Clinics	Stephanie Moore – President and CEO
Baptist Health	Greg Gerard – President Judy Ponder – Director of Education and Professional Development Mendy Blair – Chief Nursing Officer
CHI Saint Joseph Health	Dan Goulson – Chief Medical Officer
Kentucky Primary Care Association	Molly Lewis – CEO Ashley Gibson – Director of Member Advancement

EKU Composite Financial Index (CFI) Calculation

EKU's CFI is calculated using the methodology outlined for public institutions by the Higher Learning Commission.

PUBLIC

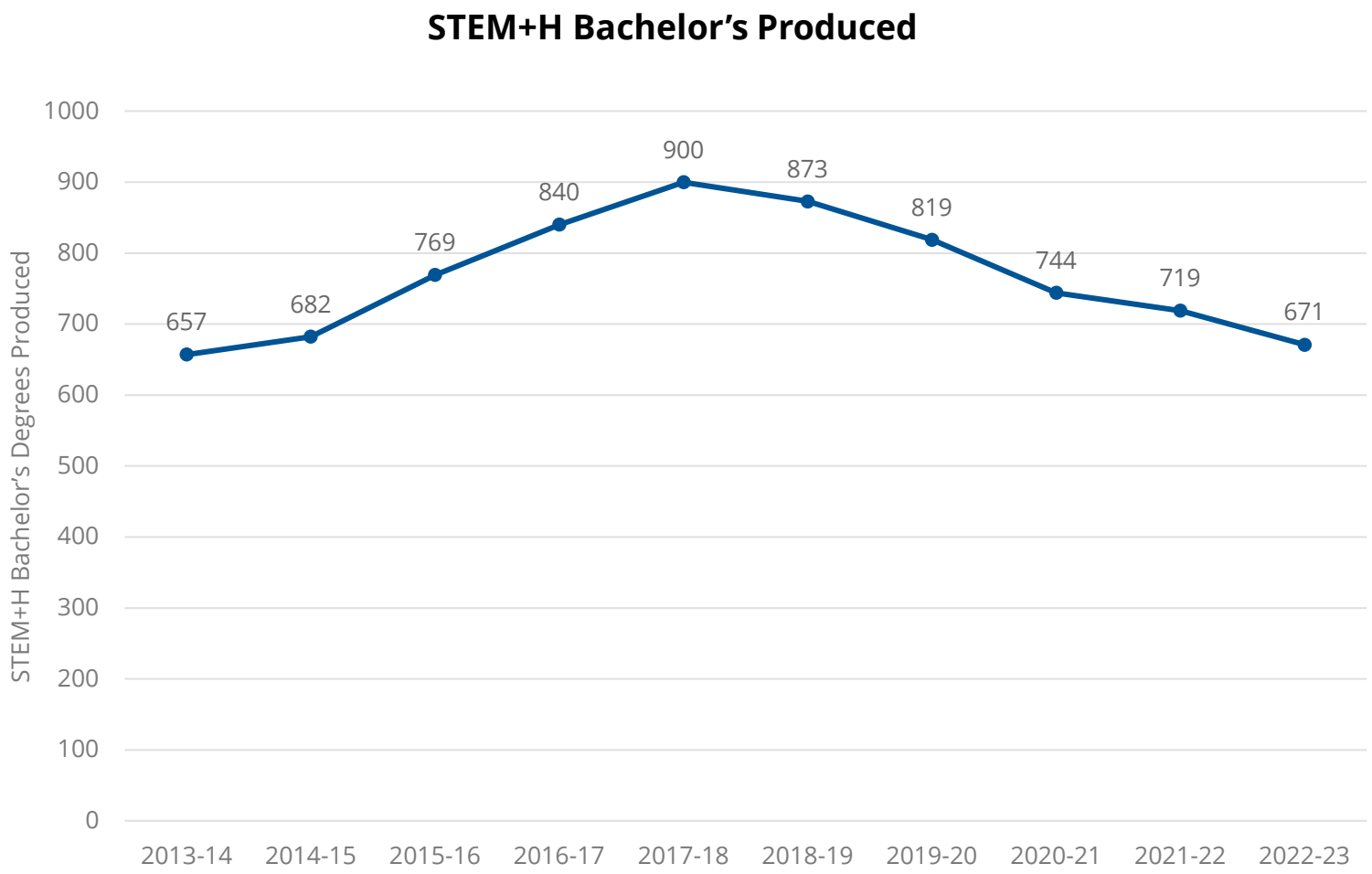
Primary Reserve	Strength = ratio / .133 Strength = 10 if > 10 Strength = -4 if < -4 Weight = .35 cfi = strength * weight
Net Operating Revenue	Strength = ratio /.013 Strength = 10 if > 10 Strength = -4 if < -4 Weight = .10 cfi = strength * weight
Return on Net Assets	Strength = ratio /.02 Strength = 10 if > 10 Strength = -4 if < -4 Weight = .20 ratio = strength * weight
Viability	Strength = 10 if denominator = 0 Strength = ratio /.417 Strength = 10 if > 10 Strength = -4 if < -4 Weight = .35 cfi = strength * weight

Financial Ratios

Primary Reserve Ratio Calculation:		Data	Strength	Weight	CFI
Institution unrestricted net assets	+	21,301,558.0			
Institution expendable restricted net assets	+	69,731,384.0			
C.U. unrestricted net assets	+	11,863,852.0			
C.U. temporary restricted net assets	+	32,753,020.0			
C.U. net investment in plant	-	646,652.0			
Numerator Total		135,003,162.0			
Institution operating expenses	+	304,694,197.0			
Institution non-operating expenses	+	7,854,062.0			
C.U. total expenses	+	5,932,486.0			
Denominator Total		318,480,745.0			
Primary Reserve Ratio =	÷	**0.42**	**3.19**	**0.35**	**1.12**
Net Operating Revenue Ratio Calculation:					
Institution operating income (loss)	+	(157,458,936.0)			
Institution net non-operating revenues	+	147,467,459.0			
C.U. change in unrestricted net assets	+	812,356.0			
Numerator Total		(9,179,121.0)			
Institution operating revenues	+	147,235,261.0			
Institution non-operating revenues	+	147,467,459.0			
C.U. total unrestricted revenues	+	6,744,842.0			
Denominator Total		301,447,562.0			
Net Operating Revenue Ratio =	÷	**-0.03**	**-2.34**	**0.10**	**-0.23**
Return on Net Assets Ratio Calculation:					
Change in net assets + C.U. change in net assets		4,784,780.0			
Total net assets + C.U. total net assets (beginning of year)		186,038,485.0			
Return on Net Assets Ratio =	÷	**0.03**	**1.29**	**0.20**	**0.26**
Viability Ratio Calculation:					
Expendable net assets **Numerator Total =**		135,003,162.0			
Institution long-term debt (total project related debt)	+	160,665,942.0			
C.U. long-term debt (total project related debt)	+	0.0			
Denominator Total		160,665,942.0			
Viability Ratio =	÷	**0.84**	**2.02**	**0.35**	**0.71**
COMPOSITE FINANCIAL INDICATOR SCORE (CFI)					**1.84**

Sources: EKU State Audited Financial Statements; Higher Learning Commission CFI Worksheet

Current State Performance on the Comprehensive Funding Model



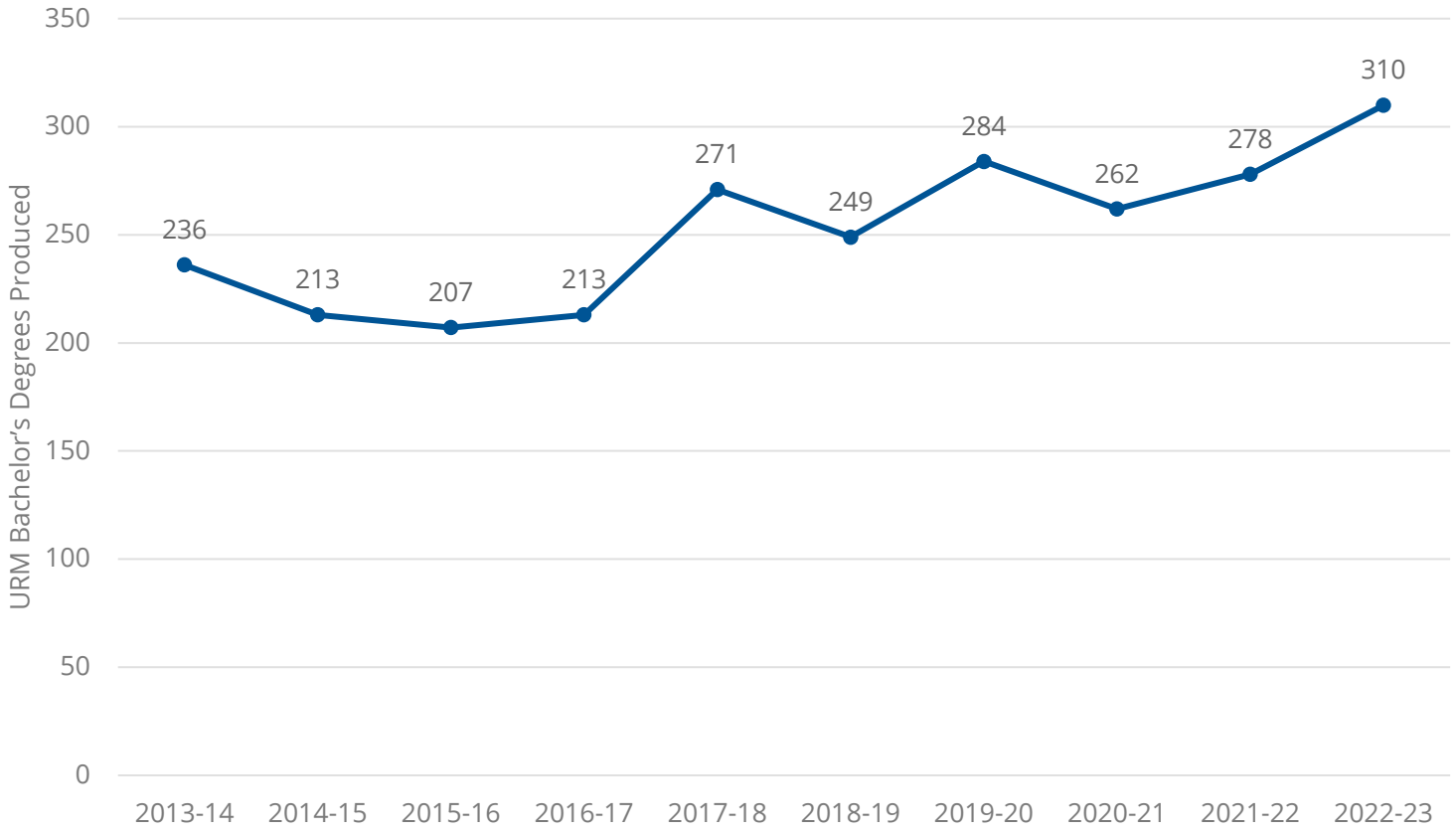
2% EKU

7% KY Comps[2]

number of STEM+H Bachelor's produced from 2013-14 to 2022-23

Current State Performance on the Comprehensive Funding Model

Underrepresented Minority Student (URM) Bachelor's Produced[1]

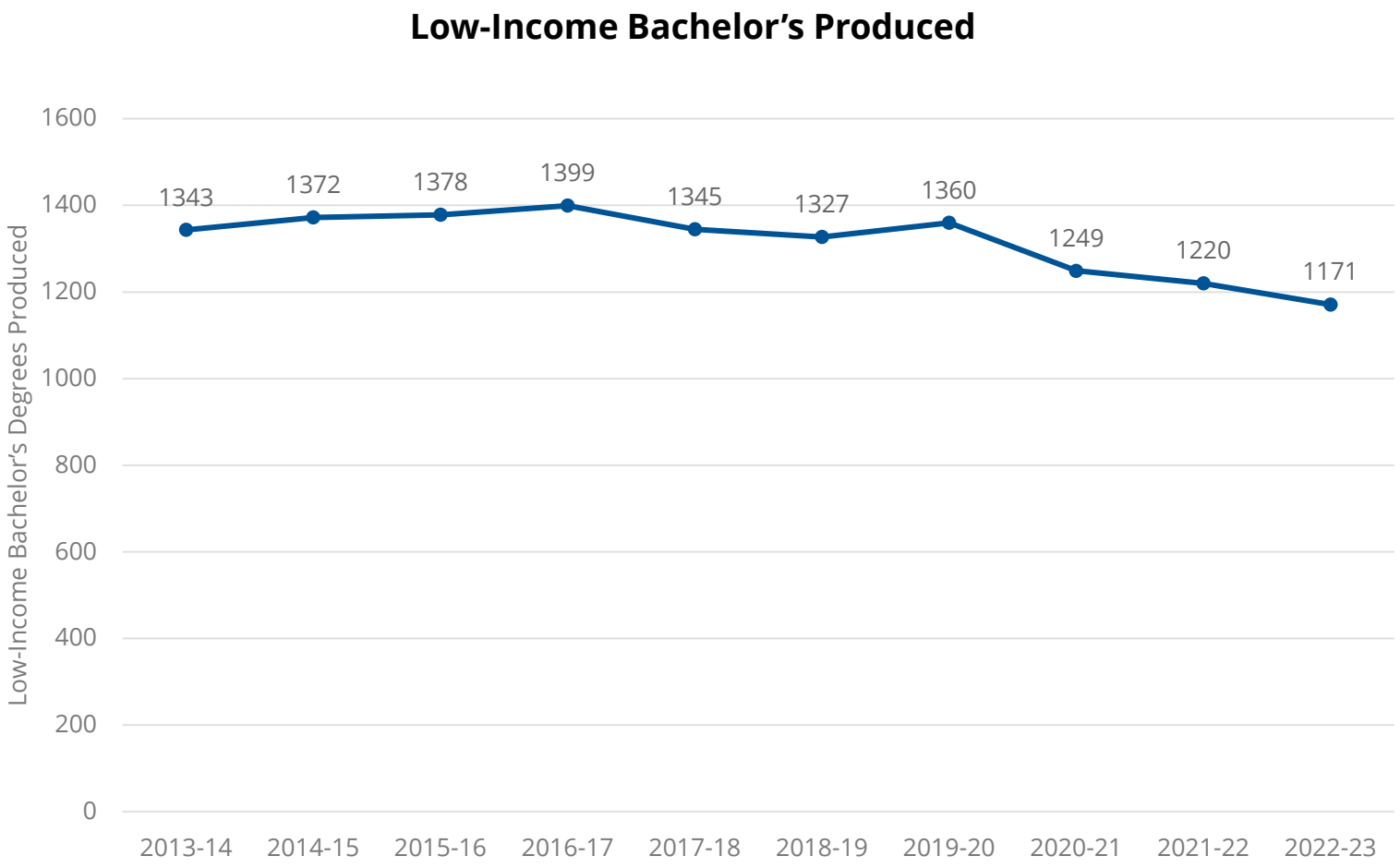


31% EKU | **23%** KY Comps

number of URM Bachelor's produced from 2013-14 to 2022-23

Notes: 1) The URM Bachelor's Degrees metric has been amended to "underrepresented students", defined as "first generation college students", for the 2024-25 funding distribution.

Current State Performance on the Comprehensive Funding Model

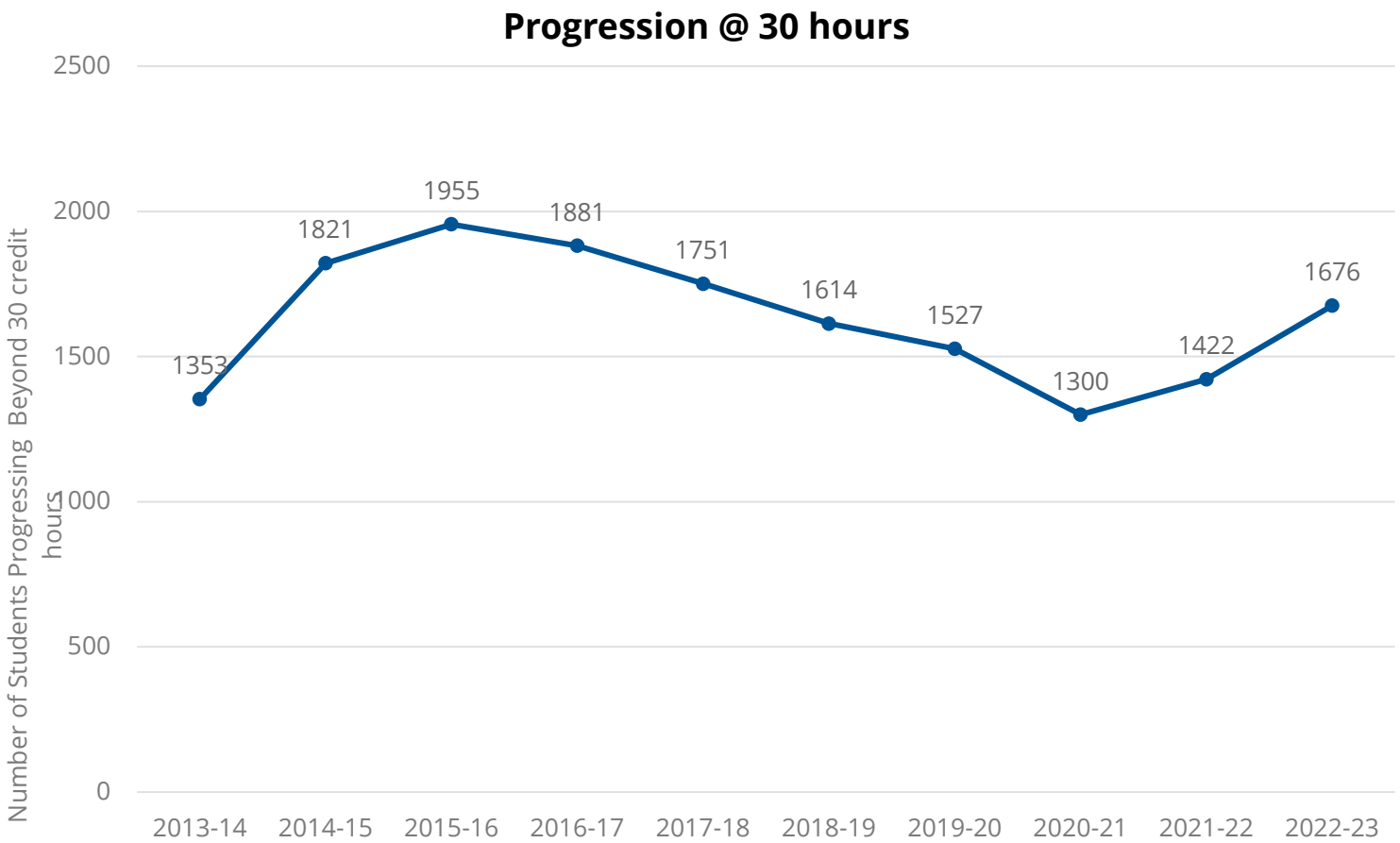


13% EKU

15% KY Comps

number of Low-Income Bachelor's produced from 2013-14 to 2022-23

Current State Performance on the Comprehensive Funding Model



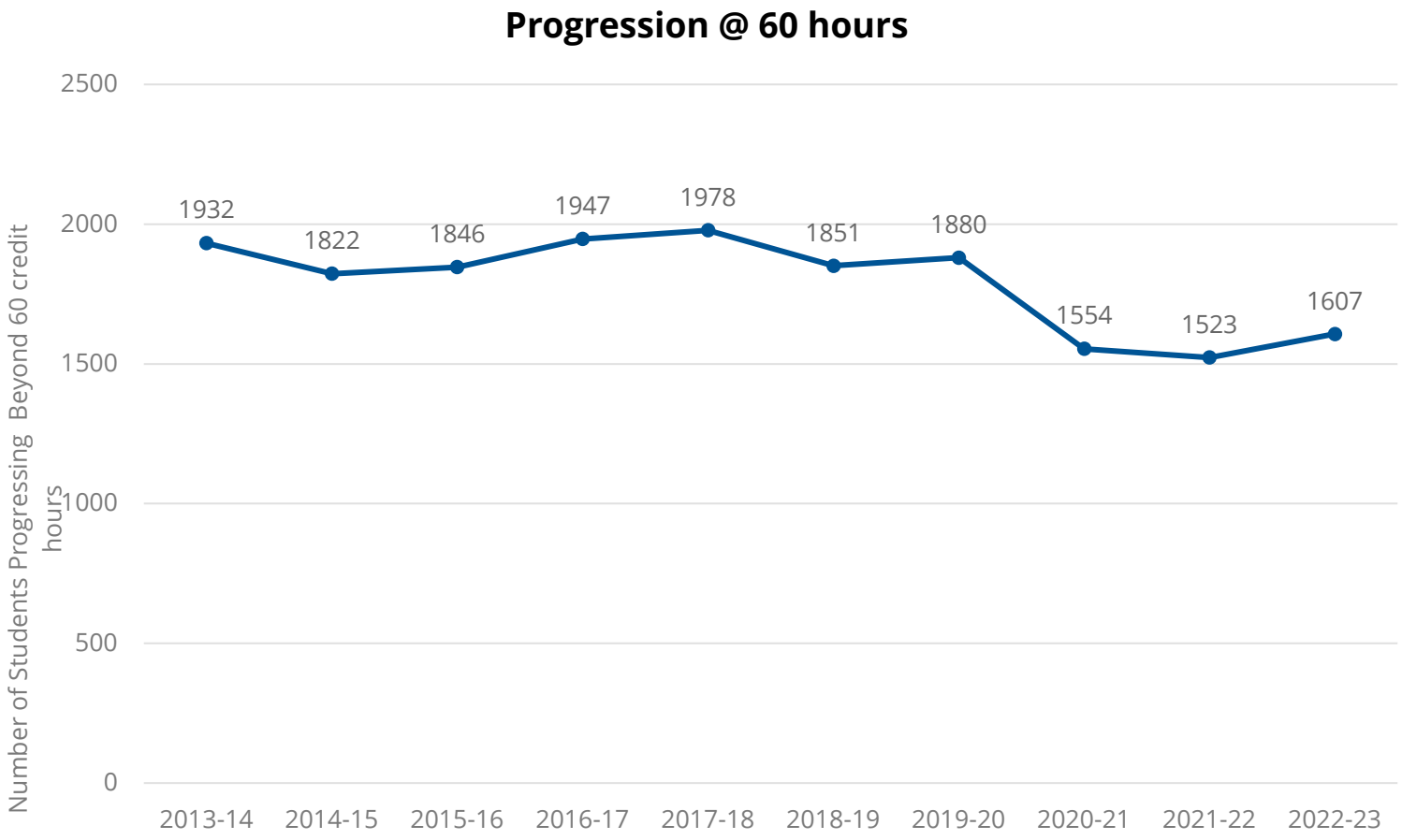
24% EKU

20% KY Comps[1]

number of undergraduate students @ 30 hours from 2013-14 to 2022-23

Note: 1) KY Comps refers to all six Kentucky public comprehensive universities: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University. Source: Funding Model Outcomes provided by CPE.

Current State Performance on the Comprehensive Funding Model

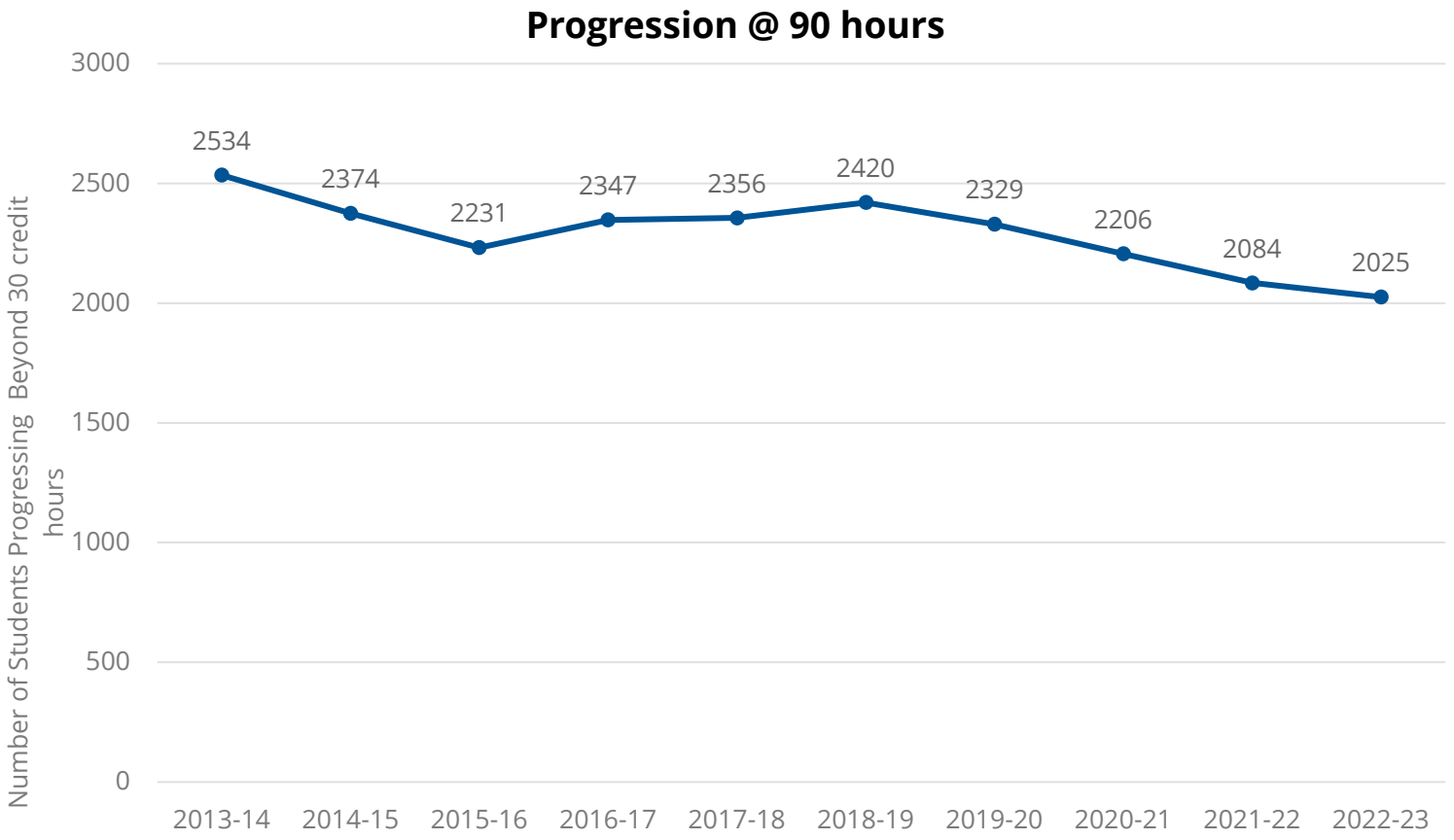


17% EKU

15% KY Comps

number of undergraduate students @ 60 hours produced from 2013-14 to 2022-23

Current State Performance on the Comprehensive Funding Model

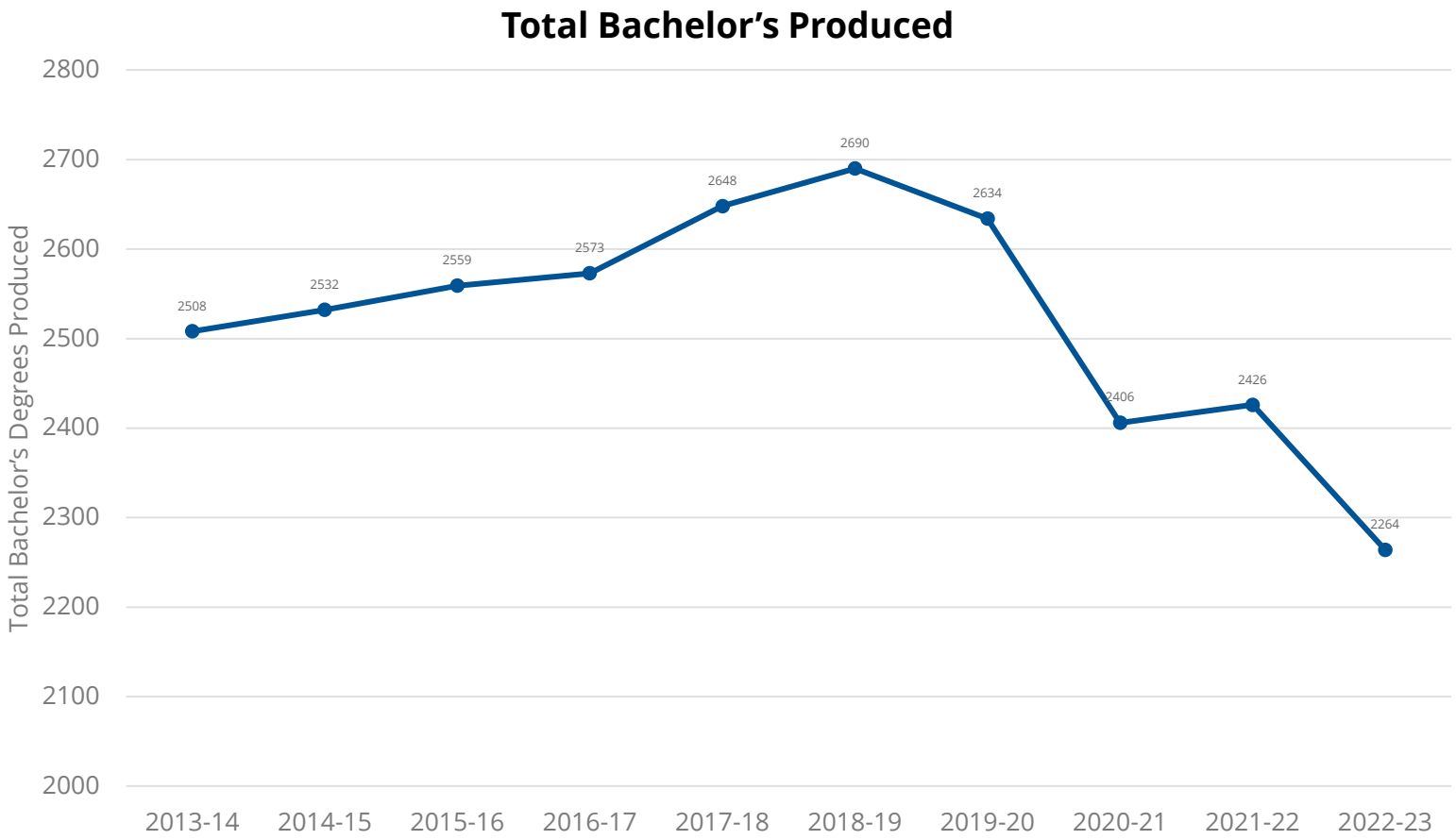


20% EKU

11% KY Comps

number of undergraduate students @ 90 hours from 2013-14 to 2022-23

Current State Performance on the Comprehensive Funding Model



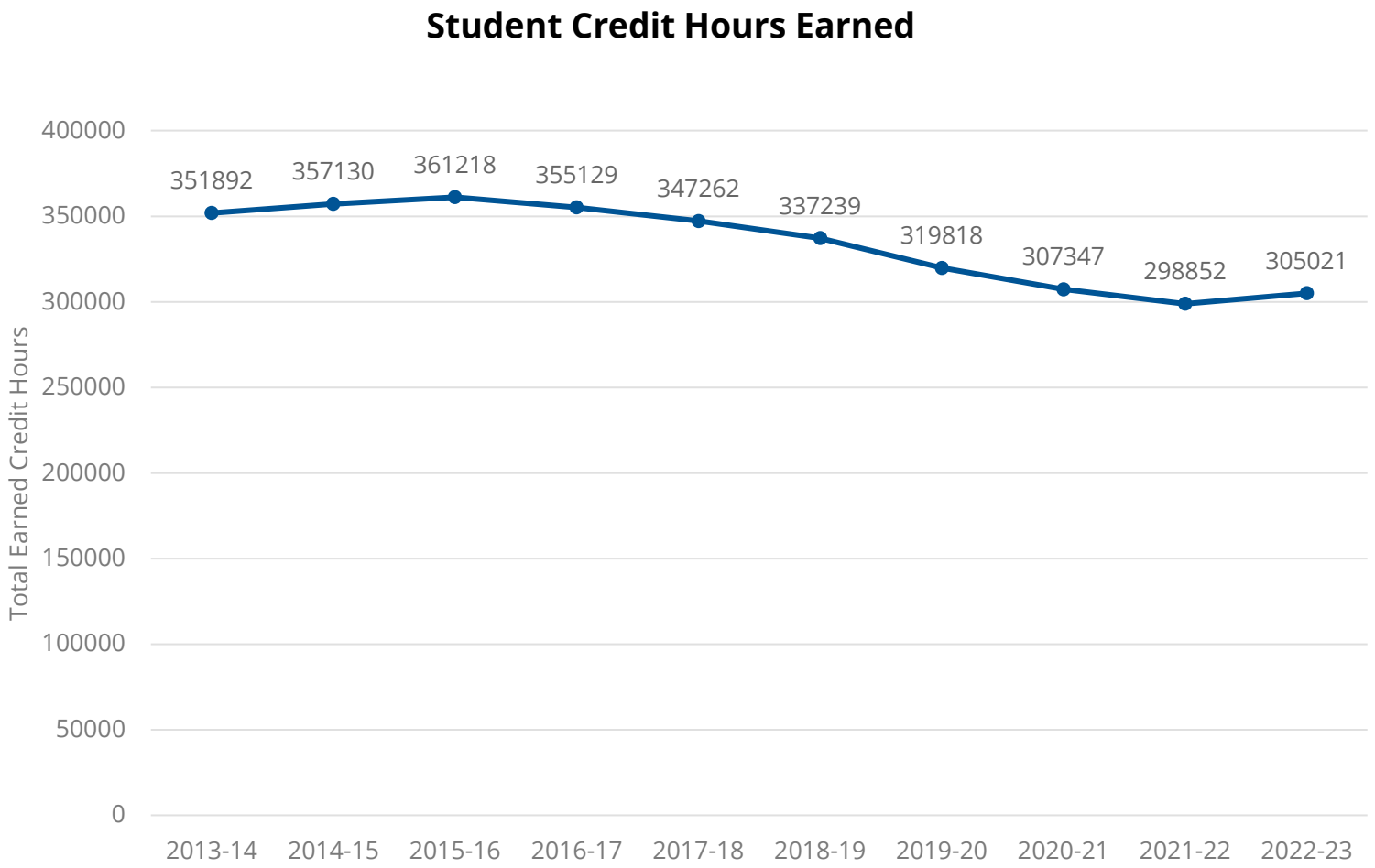
10% EKU

8% KY Comps[1]

number of Total Bachelor's produced from 2013-14 to 2022-23

Note: 1) KY Comps refers to all six Kentucky public comprehensive universities: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University. Source: Funding Model Outcomes provided by CPE.

Current State Performance on the Comprehensive Funding Model

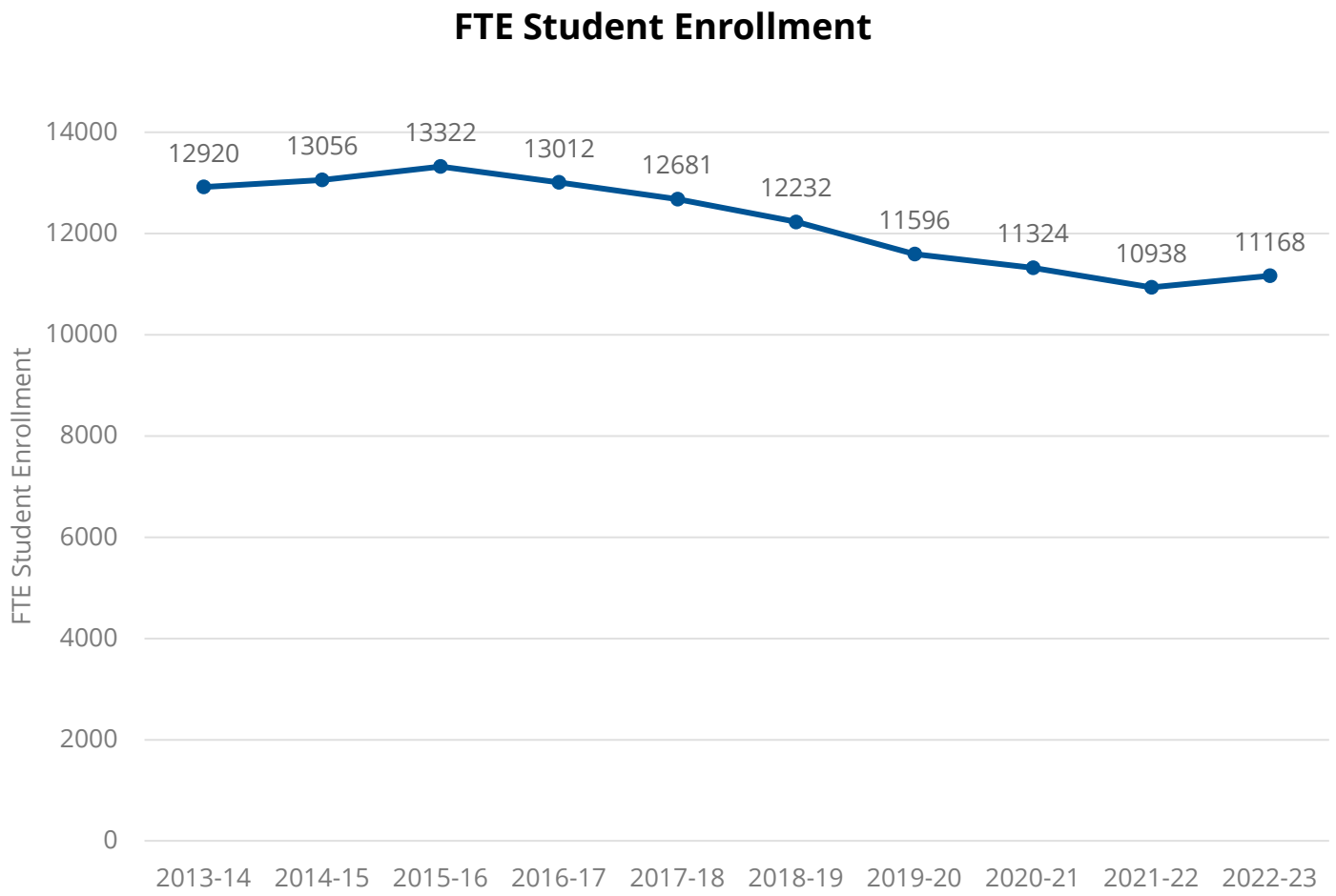


13% EKU

16% KY Comps

number of Student Credit Hours earned from 2013-14 to 2022-23

Current State Performance on the Comprehensive Funding Model



14% EKU

21% KY Comps

number of FTE Student Enrollment from 2013-14 to 2022-23

EKU Benchmark Peers | Faculty Salary

The institutions listed below were used for peer salary benchmarking for Eastern Kentucky University.

Institution	Average Salary of All Instructional Staff	Average Salary of "Professor" Rank
Wright State University-Main Campus	$88,282	$114,107
University of Louisiana at Lafayette	$78,140	$113,460
University of Tennessee-Chattanooga	$82,780	$111,625
Florida Gulf Coast University	$81,640	$107,886
Northern Kentucky University	$75,898	$106,006
Western Illinois University	$82,948	$101,427
Southern Illinois University-Edwardsville	$79,599	$98,247
Radford University	$81,781	$97,938
University of North Alabama	$78,383	$97,228
University of Southern Mississippi	$74,841	$96,379
Southeast Missouri State University	$72,400	$95,484
University of West Georgia	$74,327	$92,370
Austin Peay State University	$76,316	$90,871
University of Southern Indiana	$69,487	$89,686
Stephen F Austin State University	$70,509	$87,996
East Tennessee State University	$71,618	$87,523
Marshall University	$74,238	$87,066
Western Kentucky University	$70,087	$86,500
Murray State University	$65,186	$82,334
Morehead State University	$63,464	$77,178
AVERAGE	**$75,596**	**$96,066**

Sources: IPEDS Data Center; EKU Benchmark Institutions

Understanding Economic Impact

The IMPLAN model utilizes a methodology called input-output analysis to evaluate the potential economic impact of the proposed relocation. Input-output analysis is a means of examining the relationships within an economy between businesses, and between businesses and consumers. The resulting mathematical formula allows one to examine the effects of a change in one or several economic activities upon an entire economy (called impact analysis). Each industry that produces goods and services generates demands for other goods and services and so on, round by round. These iterations can be mathematically summarized and described by "multipliers." This buying of goods and services (indirect purchases) continues until leakages from the region stop the cycle.

MEASUREMENTS OF ECONOMIC IMPACT

- **Output** – represents the estimated increase in total production for all industries in the regionsupported by the project and is a measure of overall economic activity. Output can also be thought of as the increase in the value of total sales for the region, or "Gross Local Product".
- **Labor Income –** represents the total value of all forms of employment-based income paid to Households by a given Industry or throughout a defined economy during a specified period of time, both total payroll paid to employees (e.g. wages and salaries, supplements to wages, payroll taxes), and payments received by self-employed individuals and unincorporated business owners
- **Employment** – represents the estimated total jobs created and supported by the project, onboth a temporary and ongoing basis.

COMPONENTS OF ECONOMIC IMPACT

- **Direct effects** measure the changes in the employment and expenditures due to the operation of the development itself. Direct impacts include employment, construction, infrastructure improvements, property taxes, etc.
- **Indirect effects** measure the changes in inter-industry purchases as they respond to the demands of the directly affected industries. Indirect impacts include business-to-business purchases arising from local spending for goods and services.
- **Induced effects** measure the effects on all local industries caused by the expenditures of household income generated by the direct and indirect impacts.

COM Economic Impact Summary | Kentucky Higher Education

EASTERN KENTUCKY UNIVERSITY PROJECT – IMPACT ON MADISON COUNTY, KY

Impact Type	Effect Type	Construction (2025)	Operations – Faculty + Administrator (Single-Year)	Operations – Staff (Single-Year)
Employment (Jobs)	Direct	759	27	54
	Indirect + Induced	172	25	11
	Total	**931**	**52**	**65**
	Multiplier	**1.23**	**1.93**	**1.20**
Output ($M)	Direct	$75.0M	$7.6M	$3.4M
	Indirect + Induced	$27.1M	$3.9M	$1.8M
	Total	**$102.1M**	**$11.5M**	**$5.2M**
	Multiplier	**1.36**	**1.51**	**1.53**
Labor Income ($M)	Direct	$36.7M	$4.8M	$2.2M
	Indirect + Induced	$7.4M	$0.9M	$0.4M
	Total	**$44.1M**	**$5.7M**	**$2.6M**
	Multiplier	**1.20**	**1.19**	**1.18**

EASTERN KENTUCKY UNIVERSITY PROJECT – IMPACT ON STATE OF KENTUCKY

Impact Type	Effect Type	Construction (2025)	Operations – Faculty + Administrator (Single-Year)	Operations – Staff (Single-Year)
Employment (Jobs)	Direct	682	27	54
	Indirect + Induced	298	40	18
	Total	**980**	**67**	**72**
	Multiplier	**1.44**	**2.48**	**1.33**
Output ($M)	Direct	$75.8 M	$9.1 M	$4.1 M
	Indirect + Induced	$58.3 M	$7.4 M	$3.4 M
	Total	**$134.1 M**	**$16.5 M**	**$7.5 M**
	Multiplier	**1.77**	**1.81**	**1.83**
Labor Income ($M)	Direct	$41.0 M	$5.0 M	$2.3 M
	Indirect + Induced	$17.3 M	$2.1 M	$0.9 M
	Total	**$58.3 M**	**$7.1 M**	**$3.2 M**
	Multiplier	**1.42**	**1.42**	**1.39**

Note: "Construction" refers to the capital investments and the associated impacts of the development and construction of new educational facilities; "Operations" refers to the direct project staffing and operation of the new academic programs represented in a single-year; results are presented for both schools/academic programs and are intended to represent the impact that each project has on the respective county economy.

COM Timeline Assumptions

The illustrative timeline for opening the COM below lays out key milestones and inflection points that significantly influence revenue, expense, and accreditation activities. The timeline below was developed using key activities and dates outlined by EKU but includes adjustments as determined appropriate for timeline feasibility. Additionally, this timeline is our best assessment based on available information and may change as a result of unforeseen circumstances and/or program assumption adjustments.

Assumed Timeline[1] for Modeling Purposes (Illustrative)

CURRENT YEAR:

FY 2025

- General Assembly may approve doctoral program in osteopathic medicine at EKU
- CPE approves doctoral program in osteopathic medicine at EKU
- EKU applies for COM Applicant Status with COCA
- COM Founding Dean is hired (at least twelve months prior to candidate status application submission) and initial steps for launching the COM begin

FY 2026

- EKU solidifies COM financing plan (state appropriations, gifts, etc.)
- Associate deans are hired (at least one of which must be a board-certified DO for candidate status)
- Clinical agreements to support COM students are established
- EKU finalizes business plan and applies for Candidate Status; $48.75M in required COCA reserves are in place

FY 2027

- Initial hires are made to more fully fill faculty positions needed to develop programming
- EKU develops Pre-accreditation plan and applies for Pre-accreditation Status (eighteen months prior to first class)

FY 2028

- Admissions staff start in advance of recruiting first class (anticipated Fall 29)
- Approval of Pre-Accreditation Status[2] is subject to a site visit no less than six months prior to the COM's matriculating students

FY 2029

- **Best-case scenario**, considering hiring and accreditation, **would allow the 1st class to matriculate in Fall 2028**

FY 2030+

- The first full complement of students may not matriculate until FY 2032+
- EKU graduates first class and seeks full accreditation status

Considering the full planning lifecycle, from due diligence, accreditation requirements, as well as hiring, marketing and other factors, it is realistic to assume that EKU would not enroll its first cohort of DO students until FY 2029 or later.

Notes: 1) Timeline considerations are based on preliminary assumptions of the Osteopathic Medicine Financial Model provided by EKU and initial conversations; The above is subject to change pending approvals and risk factors. 2) A COM may hold Pre-Accreditation Status for a period of up to five years. During this 5-year period, the COM must graduate its inaugural class in order to be eligible for consideration for accreditation status. Sources: COCA.

Appendix | Murray State University

Murray State Campus Visit

On 10/02/24, the project team visited the Murray State University campus and met with the following stakeholders.

Meeting Time (EST)	**Participants**
9:00 AM – 12:00 PM	• Bob Jackson – President • Brian Parr – Dean, Hutson School of Agriculture • Tim Todd – Provost and VP for Academic Affairs • Jackie Dudley – Vice President for Financial Services • Jordan Smith – Assistant Vice President for Public Affairs • Richard Heath – KY House of Representatives • Robert Miller – General Counsel • Bob Pervine – Associate Provost, Hutson School of Agriculture • Jason Howell – KY Senate • Danny Carroll – KY Senate • Renee Fister – Associate Provost

Murray State External Stakeholders

The project team conducted interviews with leaders from Veterinary Medicine colleges and schools.

Stakeholder Group	Meeting Participants
Kentucky Veterinary Medical Association (KVMA)	Dr. Wade King, President
Lincoln Memorial University (LMU)	Dr. Stacy Anderson, Executive Dean, College of Veterinary Medicine
Auburn University	Dr. Calvin Johnson, Dean, College of Veterinary Medicine
University of Maryland Eastern Shore (UMES)	Dr. Stanley Robertson, School of Veterinary Medicine
Texas Tech University	Dr. Guy Loneragan, Dean, School of Veterinary Medicine

Murray State Composite Financial Index (CFI) Calculation

Murray State's CFI is calculated using the methodology outlined for public institutions by the Higher Learning Commission.

PUBLIC

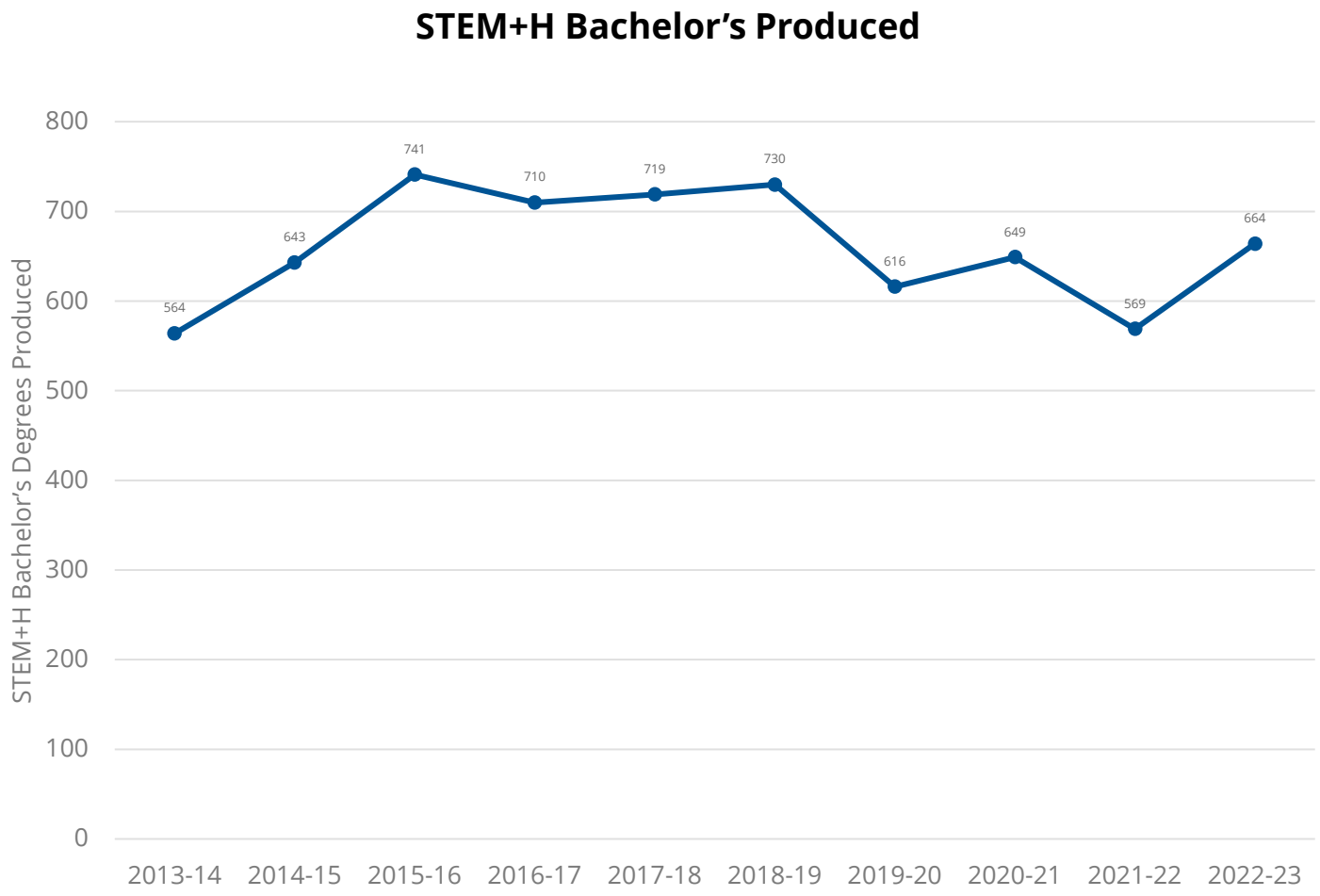
Primary Reserve	Strength = ratio / .133 Strength = 10 if > 10 Strength = -4 if < -4 Weight = .35 cfi = strength * weight
Net Operating Revenue	Strength = ratio /.013 Strength = 10 if > 10 Strength = -4 if < -4 Weight = .10 cfi = strength * weight
Return on Net Assets	Strength = ratio /.02 Strength = 10 if > 10 Strength = -4 if < -4 Weight = .20 ratio = strength * weight
Viability	Strength = 10 if denominator = 0 Strength = ratio /.417 Strength = 10 if > 10 Strength = -4 if < -4 Weight = .35 cfi = strength * weight

Financial Ratios

Primary Reserve Ratio Calculation:		Data	Strength	Weight	CFI
Institution unrestricted net assets	+	127,265,028.0			
Institution expendable restricted net assets	+	18,378,604.0			
C.U. unrestricted net assets	+	27,824,589.0			
C.U. temporary restricted net assets	+	104,582,688.0			
C.U. net investment in plant	-	6,166,398.0			
Numerator Total		271,884,511.0			
Institution operating expenses	+	191,770,742.0			
Institution non-operating expenses	+	4,299,438.0			
C.U. total expenses	+	179,673,536.0			
Denominator Total		375,743,716.0			
Primary Reserve Ratio =	÷	**0.72**	**5.44**	**0.35**	**1.90**
Net Operating Revenue Ratio Calculation:					
Institution operating income (loss)	+	(95,589,577.0)			
Institution net non-operating revenues	+	88,466,023.0			
C.U. change in unrestricted net assets	+	4,135,265.0			
Numerator Total		(2,988,289.0)			
Institution operating revenues	+	96,181,165.0			
Institution non-operating revenues	+	92,765,461.0			
C.U. total unrestricted revenues	+	11,069,677.0			
Denominator Total		200,016,303.0			
Net Operating Revenue Ratio =	÷	**-0.01**	**-1.15**	**0.10**	**-0.11**
Return on Net Assets Ratio Calculation:					
Change in net assets + C.U. change in net assets		24,869,842.0			
Total net assets + C.U. total net assets (beginning of year)		290,310,231.0			
Return on Net Assets Ratio =	÷	**0.09**	**4.28**	**0.20**	**0.86**
Viability Ratio Calculation:					
Expendable net assets **Numerator Total =**		271,884,511.0			
Institution long-term debt (total project related debt)	+	63,884,673.0			
C.U. long-term debt (total project related debt)	+	6,000,063.0			
Denominator Total		69,884,736.0			
Viability Ratio =	÷	**3.89**	**9.33**	**0.35**	**3.27**
COMPOSITE FINANCIAL INDICATOR SCORE (CFI)					**5.91**

Sources: Murray State Audited Financial Statements; Higher Learning Commission CFI Worksheet

Current State Performance on the Comprehensive Funding Model



18% Murray State

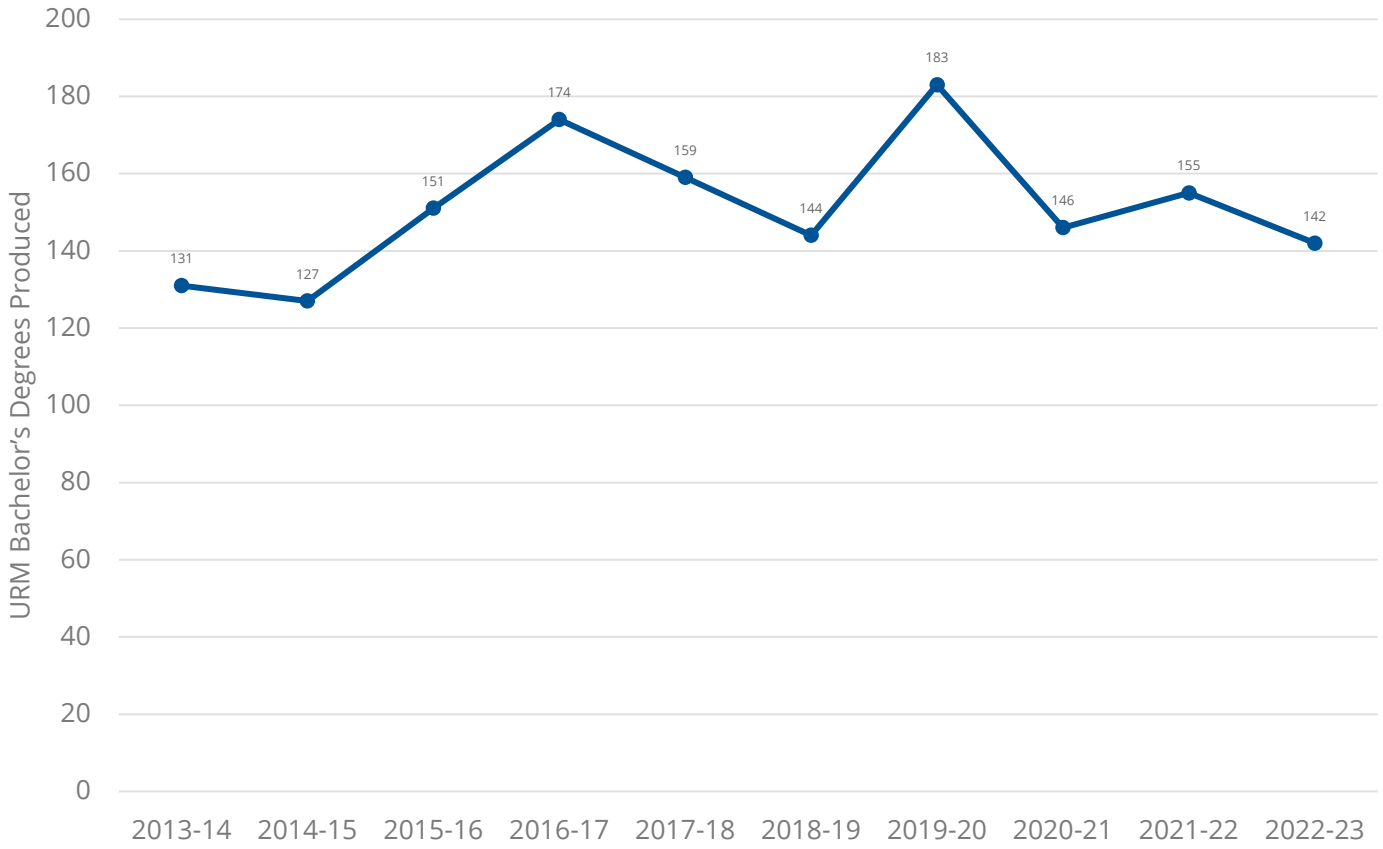
7% KY Comps[1]

number of STEM+H Bachelor's produced from 2013-14 to 2022-23

Notes: 1) KY Comps refers to all six Kentucky public comprehensive universities: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University. Source: Funding Model Outcomes provided by CPE.

Current State Performance on the Comprehensive Funding Model

Underrepresented Minority Student (URM) Bachelor's Produced[1]



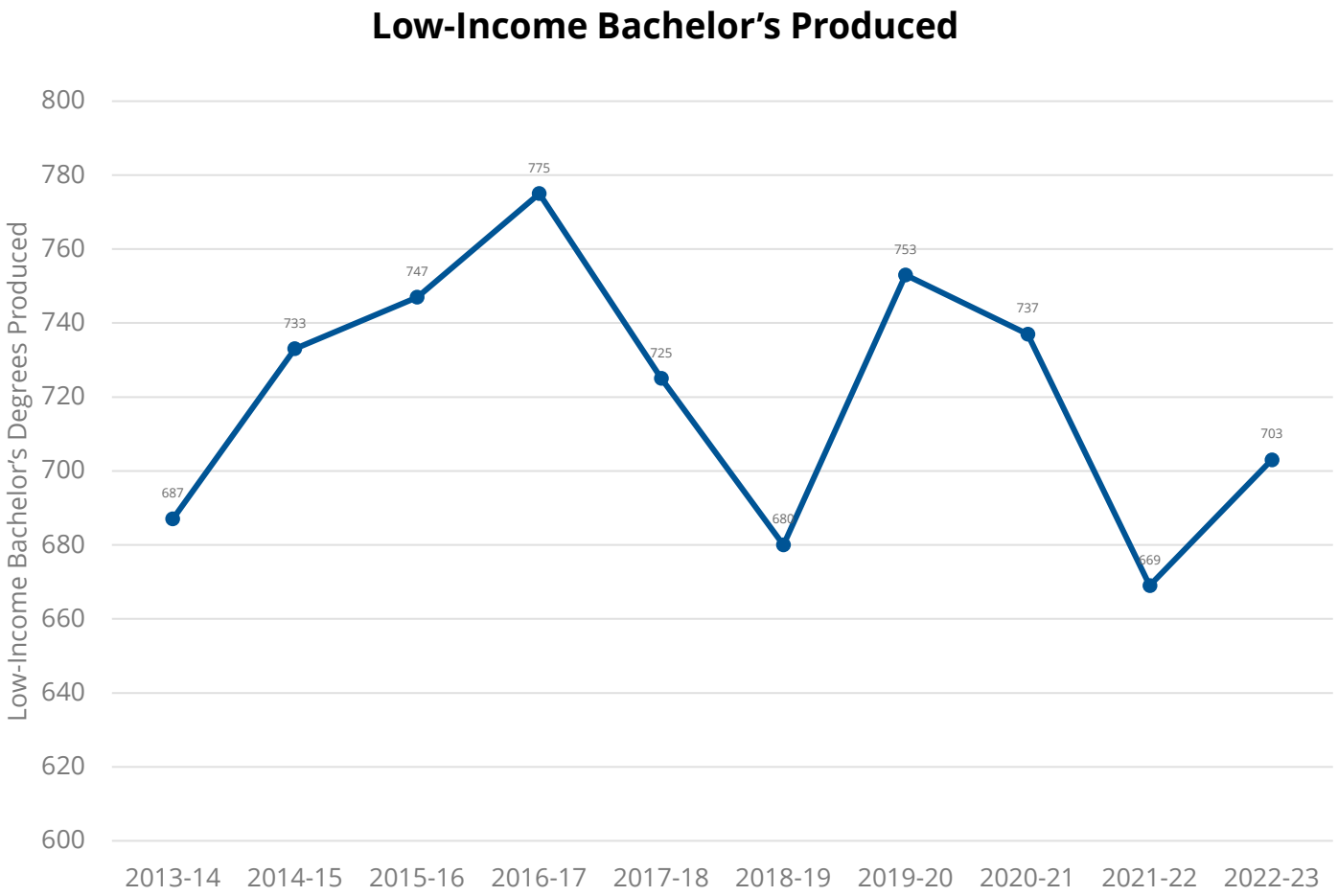
8% Murray State

23% KY Comps

number of URM Bachelor's produced from 2013-14 to 2022-23

Notes: 1)The URM Bachelor's Degrees metric has been amended to "underrepresented students", defined as "first generation college students", for the 2024-25 funding distribution.

Current State Performance on the Comprehensive Funding Model

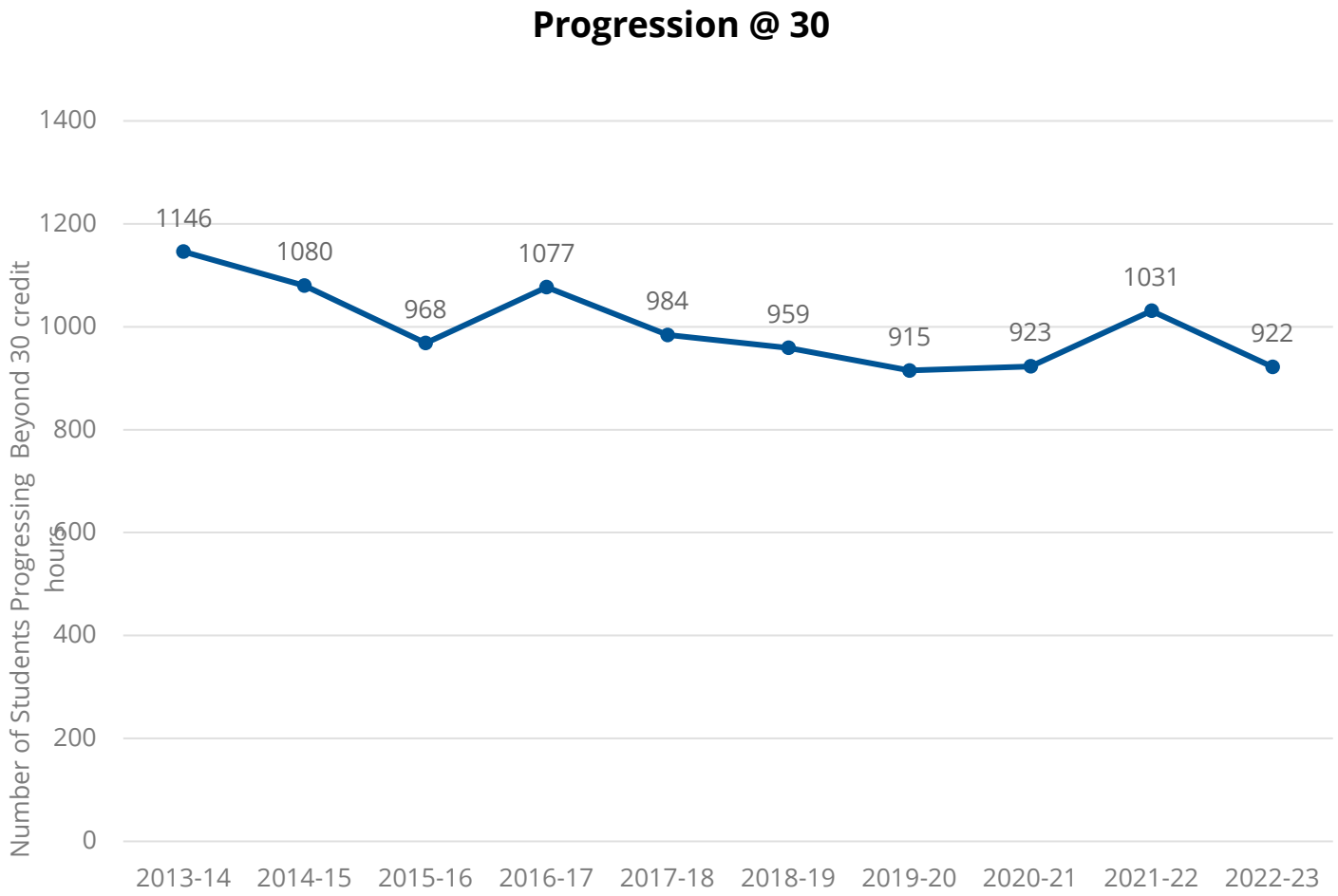


2% Murray State

15% KY Comps

number of Low-Income Bachelor's produced from 2013-14 to 2022-23

Current State Performance on the Comprehensive Funding Model



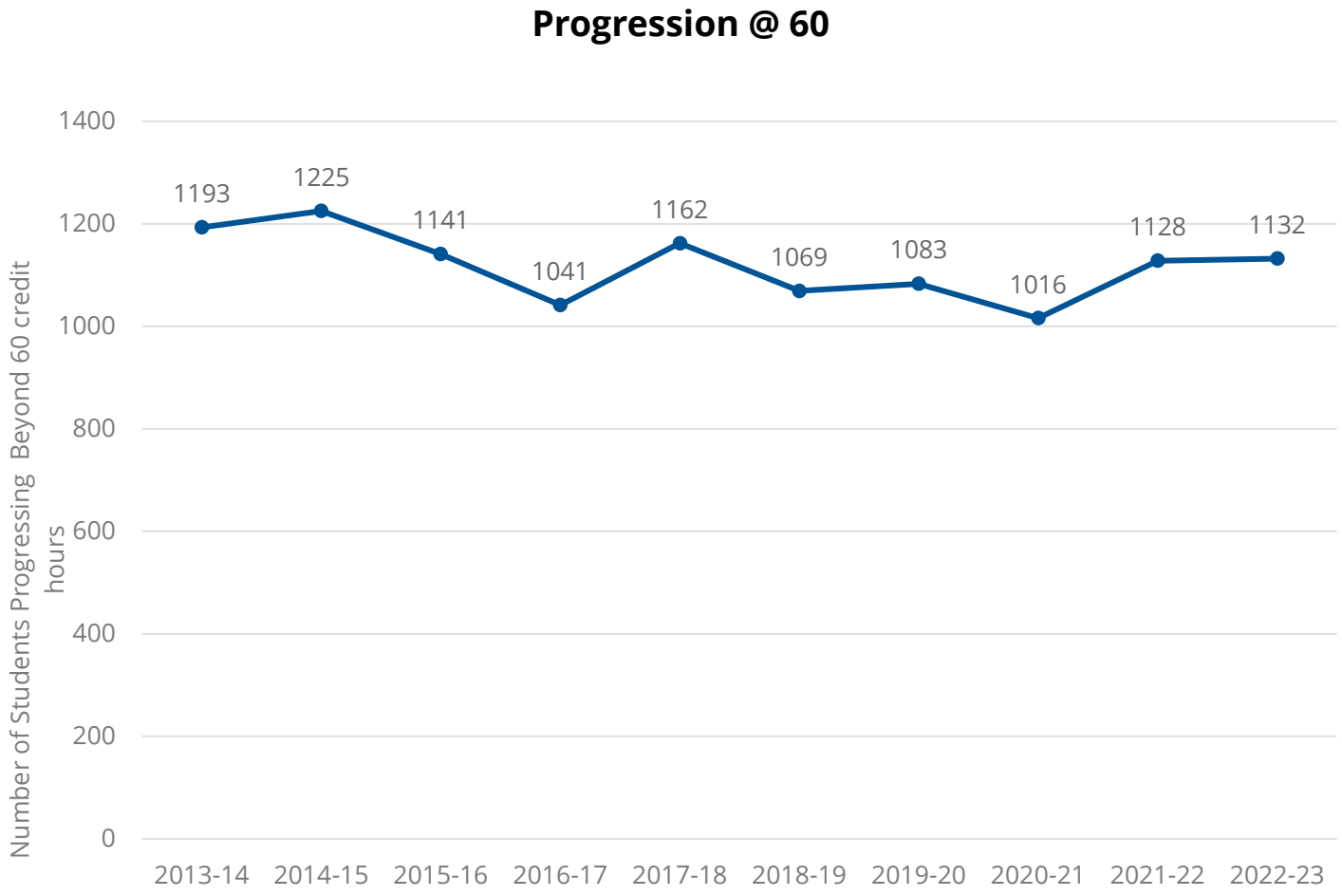
20% Murray State

20% KY Comps[1]

number of undergraduate students @ 30 hours from 2013-14 to 2022-23

Notes: 1) KY Comps refers to all six Kentucky public comprehensive universities: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University. Source: Funding Model Outcomes provided by CPE.

Current State Performance on the Comprehensive Funding Model

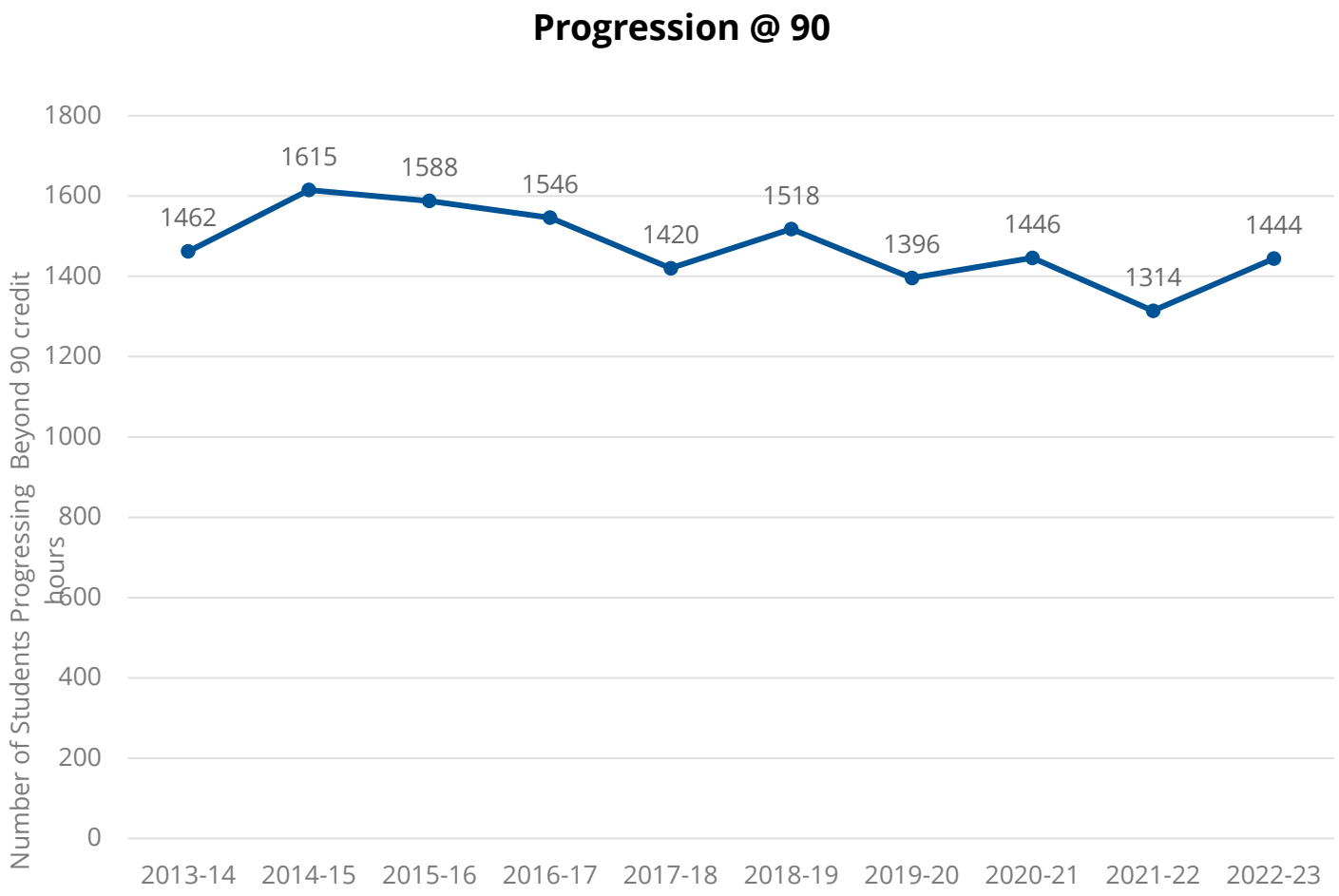


5% Murray State

15% KY Comps

number of undergraduate students @ 60 hours from 2013-14 to 2022-23

Current State Performance on the Comprehensive Funding Model

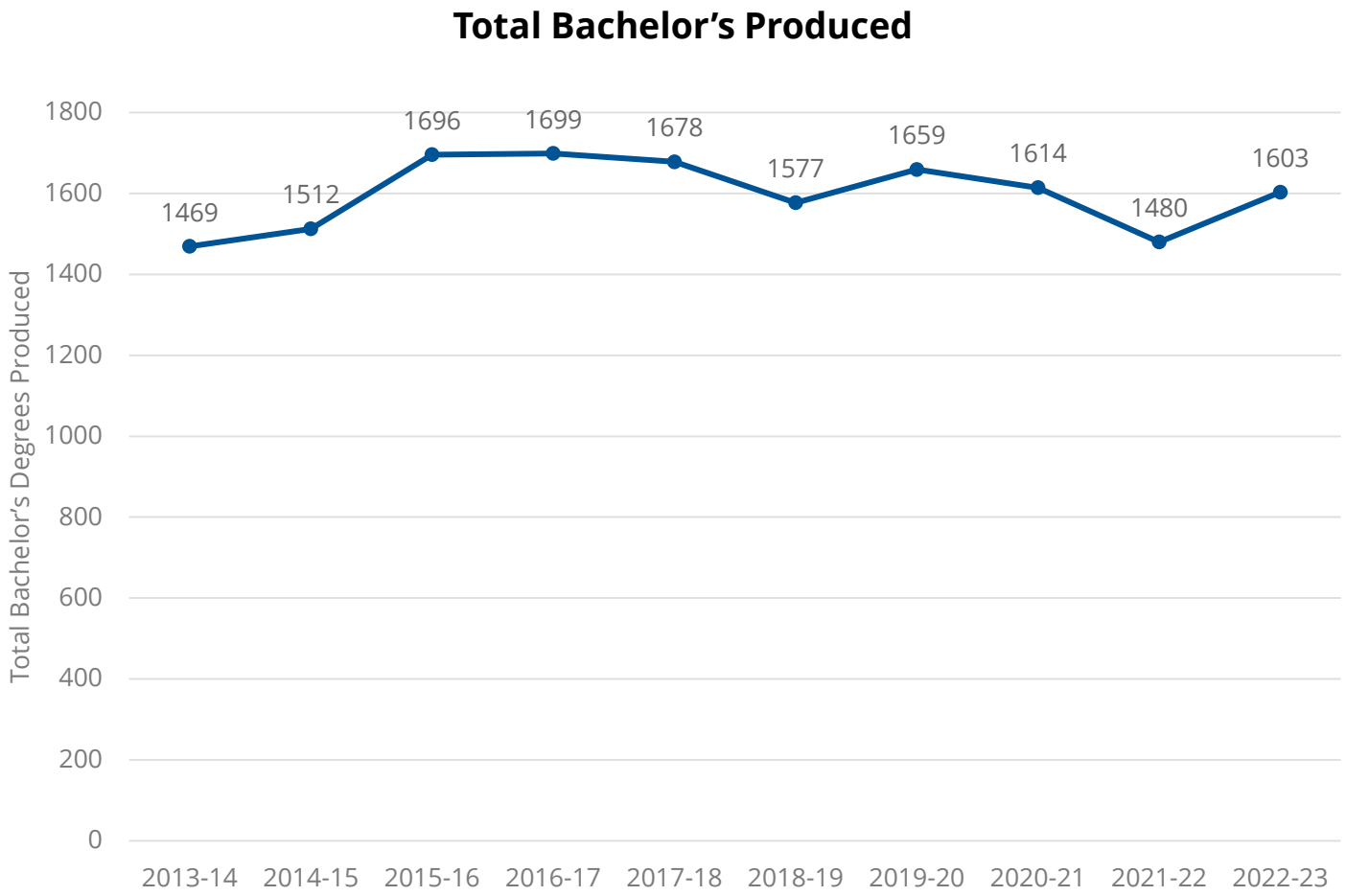


1% Murray State

11% KY Comps

number of undergraduate students @ 90 hours from 2013-14 to 2022-23

Current State Performance on the Comprehensive Funding Model



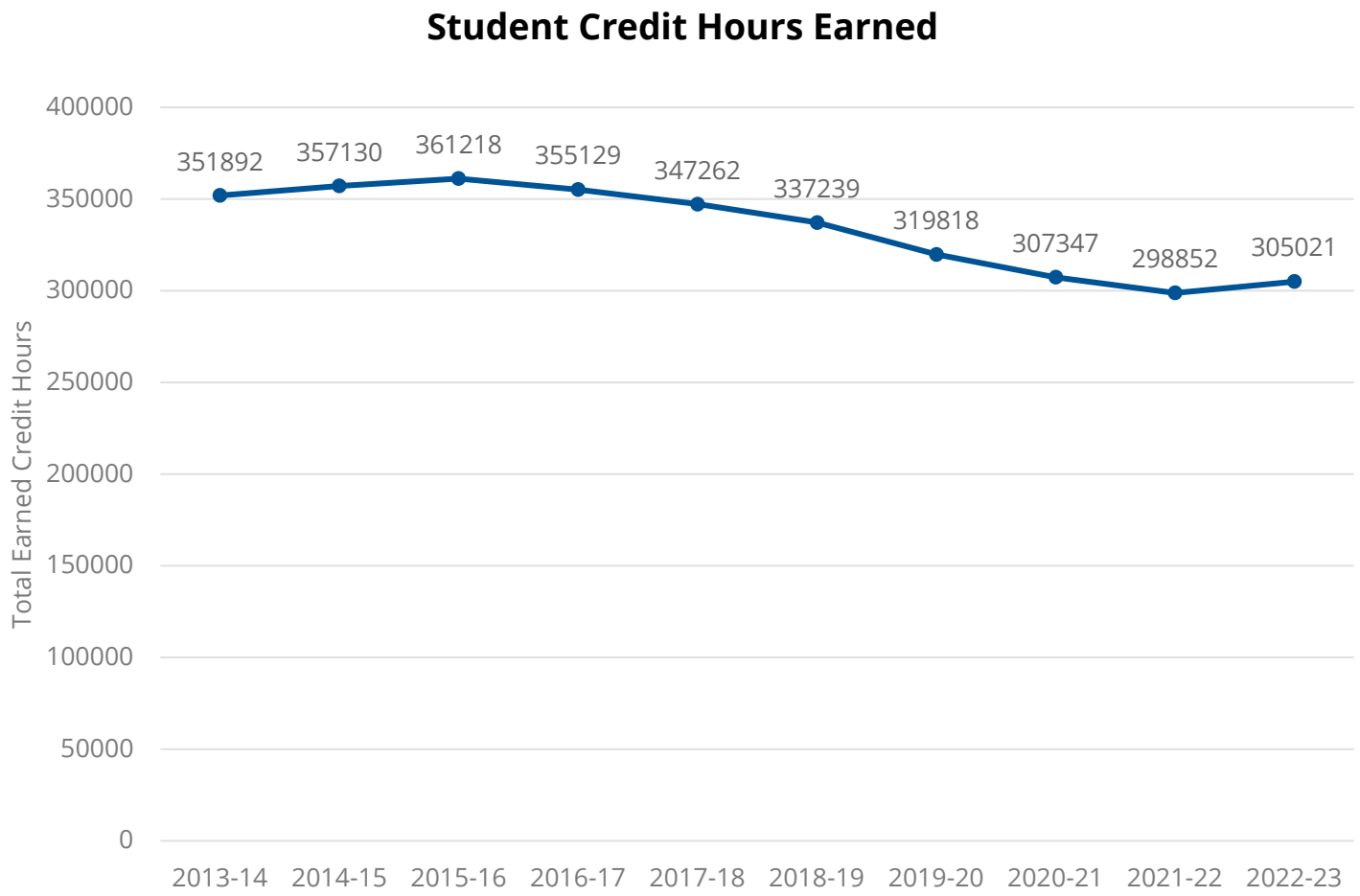
9% Murray State

8% KY Comps[1]

number of Total Bachelor's produced from 2013-14 to 2022-23

Note: 1) KY Comps refers to all six Kentucky public comprehensive universities: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University. Source: Funding Model Outcomes provided by CPE.

Current State Performance on the Comprehensive Funding Model

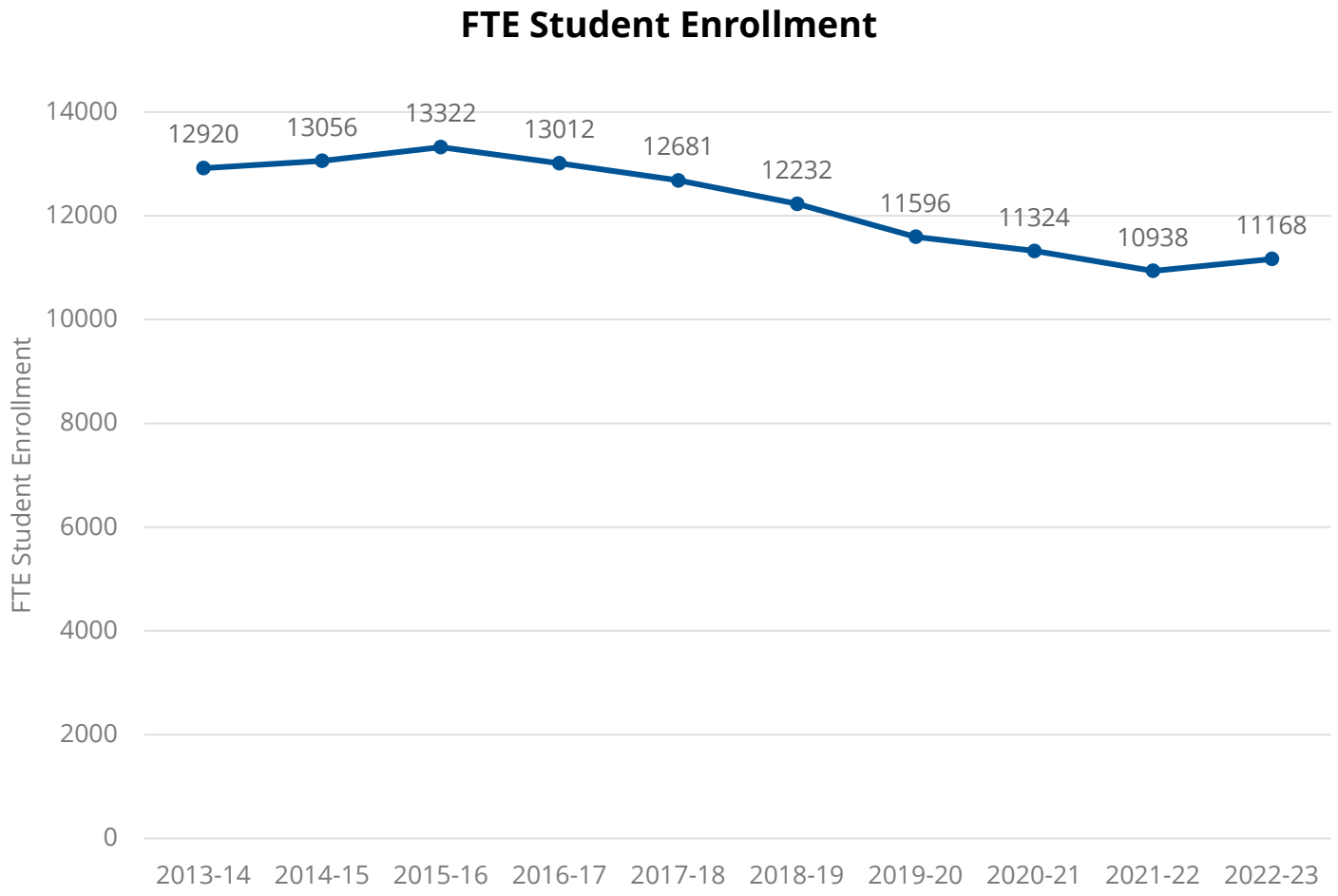


14% Murray State

16% KY Comps

number of Student Credit Hours earned from 2013-14 to 2022-23

Current State Performance on the Comprehensive Funding Model



14% Murray State

21% KY Comps

number of FTE Student Enrollment from 2013-14 to 2022-23

Murray State Benchmark Peers | Faculty Salary

The institutions listed below were used for peer salary benchmarking for Murray State University.

Institution	Average Salary of All Instructional Staff	Average Salary of "Professor" Rank
Eastern Washington University	$89,419	$115,927
Rhode Island College	$95,976	$114,346
Oakland University	$90,076	$114,183
The University of Tennessee - Chattanooga	$82,780	$111,625
Central Connecticut State University	$93,427	$110,411
Western Carolina University	$76,259	$104,961
Western Illinois University	$82,948	$101,427
University of Nebraska - Omaha	$78,853	$101,213
Plymouth State University	$80,100	$97,913
Southeast Missouri State University	$72,400	$95,484
Eastern Illinois University	$77,117	$94,552
Frostburg State University	$76,620	$94,285
University of Central Missouri	$76,210	$94,113
Indiana State University	$68,850	$89,186
University of Montevallo	$76,970	$89,058
Northwest Missouri State University	$68,768	$88,618
Stephen F. Austin State University	$70,509	$87,996
The University of Tennessee - Martin	$71,217	$84,304
Pittsburg State University	$69,645	$81,976
AVERAGE	**$78,850**	**$98,504**

Understanding Economic Impact

The IMPLAN model utilizes a methodology called input-output analysis to evaluate the potential economic impact of the proposed relocation. Input-output analysis is a means of examining the relationships within an economy between businesses, and between businesses and consumers. The resulting mathematical formula allows one to examine the effects of a change in one or several economic activities upon an entire economy (called impact analysis). Each industry that produces goods and services generates demands for other goods and services and so on, round by round. These iterations can be mathematically summarized and described by "multipliers." This buying of goods and services (indirect purchases) continues until leakages from the region stop the cycle.

MEASUREMENTS OF ECONOMIC IMPACT

- **Output** – represents the estimated increase in total production for all industries in the regionsupported by the project and is a measure of overall economic activity. Output can also be thought of as the increase in the value of total sales for the region, or "Gross Local Product".
- **Labor Income –** represents the total value of all forms of employment-based income paid to Households by a given Industry or throughout a defined economy during a specified period of time, both total payroll paid to employees (e.g. wages and salaries, supplements to wages, payroll taxes), and payments received by self-employed individuals and unincorporated business owners
- **Employment** – represents the estimated total jobs created and supported by the project, onboth a temporary and ongoing basis.

COMPONENTS OF ECONOMIC IMPACT

- **Direct effects** measure the changes in the employment and expenditures due to the operation of the development itself. Direct impacts include employment, construction, infrastructure improvements, property taxes, etc.
- **Indirect effects** measure the changes in inter-industry purchases as they respond to the demands of the directly affected industries. Indirect impacts include business-to-business purchases arising from local spending for goods and services.
- **Induced effects** measure the effects on all local industries caused by the expenditures of household income generated by the direct and indirect impacts.

CVM Economic Impact Summary – Kentucky Higher Education

MURRAY STATE UNIVERSITY PROJECT – IMPACT ON CALLOWAY COUNTY, KY

Impact Type	Effect Type	Construction (2025)	Operations – Faculty + Administrator (Single-Year)	Operations – Staff (Single-Year)
Employment (Jobs)	Direct	628	27	40
	Indirect + Induced	149	72	36
	Total	**777**	**99**	**76**
	Multiplier	**1.24**	**3.67**	**1.90**
Output ($M)	Direct	$60.0M	$18.7M	$9.2M
	Indirect + Induced	$25.4M	$12.3M	$6.1M
	Total	**$85.4M**	**$31.0M**	**$15.3M**
	Multiplier	**1.42**	**1.66**	**1.66**
Labor Income ($M)	Direct	$29.3M	$8.6M	$4.2M
	Indirect + Induced	$3.0M	$2.7M	$1.3M
	Total	**$32.3M**	**$11.3M**	**$5.5M**
	Multiplier	**1.10**	**1.31**	**1.31**

MURRAY STATE UNIVERSITY PROJECT – IMPACT ON STATE OF KENTUCKY

Impact Type	Effect Type	Construction (2025)	Operations – Faculty + Administrator (Single-Year)	Operations – Staff (Single-Year)
Employment (Jobs)	Direct	545	27	40
	Indirect + Induced	238	31	15
	Total	**783**	**58**	**55**
	Multiplier	**1.44**	**2.15**	**1.38**
Output ($M)	Direct	$60.7 M	$7.0 M	$3.5 M
	Indirect + Induced	$46.7 M	$5.7 M	$2.9 M
	Total	**$107.4 M**	**$12.7 M**	**$6.4 M**
	Multiplier	**1.77**	**1.81**	**1.83**
Labor Income ($M)	Direct	$32.8 M	$3.9 M	$1.9 M
	Indirect + Induced	$13.9 M	$1.5 M	$0.8 M
	Total	**$45.9 M**	**$5.4 M**	**$2.7 M**
	Multiplier	**1.43**	**1.38**	**1.42**

Note: "Construction" refers to the capital investments and the associated impacts of the development and construction of new educational facilities; "Operations" refers to the direct project staffing and operation of the new academic programs represented in a single-year; results are presented for both schools/academic programs and are intended to represent the impact that each project has on the respective county economy.

APPENDIX | MURRAY STATE UNIVERSITY

CVM Timeline Assumptions

The illustrative timeline 1 for opening the CVM below lays out key milestones and inflection points that significantly influence revenue, expense, and accreditation activity. The timeline below was developed using key activities and dates outlined by Murray State but includes adjustments as determined appropriate for timeline feasibility. Additionally, this timeline is our best assessment based on available information and may change as a result of unforeseen circumstances and/or program assumption adjustments.

CURRENT YEAR:

FY 2025

- General Assembly passes statutory changes to permit a doctoral program in veterinary medicine at Murray State
- CPE approves doctoral program in veterinary medicine at Murray State
- DVM Founding Dean is hired and initial steps for launching the CVM begin
- Murray State submits self-study and applies for letter of reasonable assurance[2] from AVMA COE.

FY 2026

- Initial hires are made to more fully fill faculty positions needed to develop programming
- Admissions staff hired and begin recruitment efforts

FY 2027

- Clinical agreements to support CVM students are established
- Murray State receives provisional accreditation from the AVMA COE and organizes subsequent site visits/ reports as required
- Best-case scenario, considering hiring and accreditation, would allow the first class to matriculate in FY27

FY 2028

- Murray State organizes AVMA COE site visits/reports as required

FY 2029

- Murray State organizes AVMA COE site visits/reports as required

FY 2030+

- The first full complement of students may not matriculate until FY 2030+
- Murray State graduates its inaugural class and receives full accreditation by AVMA COE. The Council on Education expects that 80% or more of each college's graduating senior students sitting for the NAVLE will have passed at the time of graduation.

Considering the full planning lifecycle, from due diligence, accreditation requirements, as well as hiring, marketing and other factors, it is realistic to assume that the CVM's first cohort would not begin until FY 2027+.

Notes: 1) Timeline considerations are based on preliminary assumptions of the DVM Financial Model provided by Murray State and initial conversations. The timeline is subject to change pending approvals and risk factors; 2) A college granted Reasonable Assurance must offer admission to and matriculate its first class of students within three years. Sources: AVMA COE Pathways to Accreditation; AVMA COE Accreditation Policies and Procedures

Appendix | Western Kentucky University

WKU Campus Visit

On 9/25/24, the project team visited the Western Kentucky University Campus and met with the following stakeholders.

Meeting Time (EST)	**Participants**
University Leadership (8:30 – 9:50 AM)	• President Timothy Caboni • Robert "Bud" Fischer – Provost & Vice President for Academic Affairs • Susan Howarth – Executive VP for Strategy, Operations and Finance • Jennifer Breiwa Smith – Assistant Vice President, Government & External Relations • Kate Wood Hall – Government Affairs Consultant • Ron Bunch – President & CEO of Bowling Green Chamber of Commerce • Meredith Rozanski – Executive VP of Operations, Bowling Green Chamber of Commerce • Doug Gorman – Warren County Judge/Executive • Jenni Redifer – Interim Associate Provost for Research
University Deans and Research Administration (9:55 -11:15 AM)	• Robert "Bud" Fischer – Provost & Vice President for Academic Affairs • Jennifer Breiwa Smith – Assistant Vice President, Government & External Relations • Kate Wood Hall – Government Affairs Consultant • Corrinne Murphy – Dean, College of Education and Behavior Sciences • Evelyn Thrasher – Dean, Gordon Ford College of Business • David Brown – Dean, Ogden College of Science and Engineering • Tania Basta – Dean, College of Health and Human Services • Jenni Redifer – Interim Associate Provost for Research • Cathleen Webb – Professor, Associate Dean for Research, Ogden College of Science and Engineering, Director, ARTP
University Deans and Faculty (11:30 AM – 12:50 PM)	• Corrinne Murphy – Dean, College of Education and Behavior Sciences • Evelyn Thrasher – Dean, Gordon Ford College of Business • David Brown – Dean, Ogden College of Science and Engineering • Tania Basta – Dean, College of Health and Human Services • Jenni Redifer – Interim Associate Provost for Research • Faculty representatives working in the data sciences area

WKU Benchmark Peers

The institutions listed below have been identified by Western Kentucky University as benchmark peer institutions.

- Ball State University
- Bowling Green State University-Main Campus
- Central Michigan University
- East Carolina University
- East Tennessee State University
- Florida Atlantic University
- Illinois State University
- James Madison University
- Middle Tennessee State University
- Northern Illinois University
- University of North Carolina at Charlotte
- University of North Carolina at Greensboro
- University of South Alabama
- Ohio University-Main Campus
- University of Southern Mississippi
- Indiana State University
- Appalachian State University
- Towson University

Sources: WKU Benchmark Universities.

Data Sciences Peer Programs

The institutions listed below were identified as having Data Sciences doctoral programs.

- Boise State University – Computing, Data Science Concentration
- Boston University – Computing and Data Sciences
- Bowling Green State University – Data Science
- Capitol Technology University – Business Analytics and Data Science
- Chapman University – Computational and Data Sciences
- Harrisburg University of Science and Technology – Data Sciences
- Kennesaw State University – Data Science and Analytics
- New Jersey Institute of Technology – Business Data Science
- New York University – Data Science
- Southern Methodist University – Data Science
- Stevens Institute of Technology – Data Science
- Stony Brook University – Data Science
- University of Nevada Reno – Statistics and Data Science
- University of Virginia – Data Science
- Washington University in St. Louis – Computational and Data Sciences
- Worcester Polytechnic Institute – Data Science

Sources: Institutions identified using publicly available data and PhD in Data Science | Find the Best Data Science PhD Programs.

WKU Composite Financial Index (CFI) Calculation

WKU's CFI is calculated using the methodology outlined for public institutions by the Higher Learning Commission.

PUBLIC

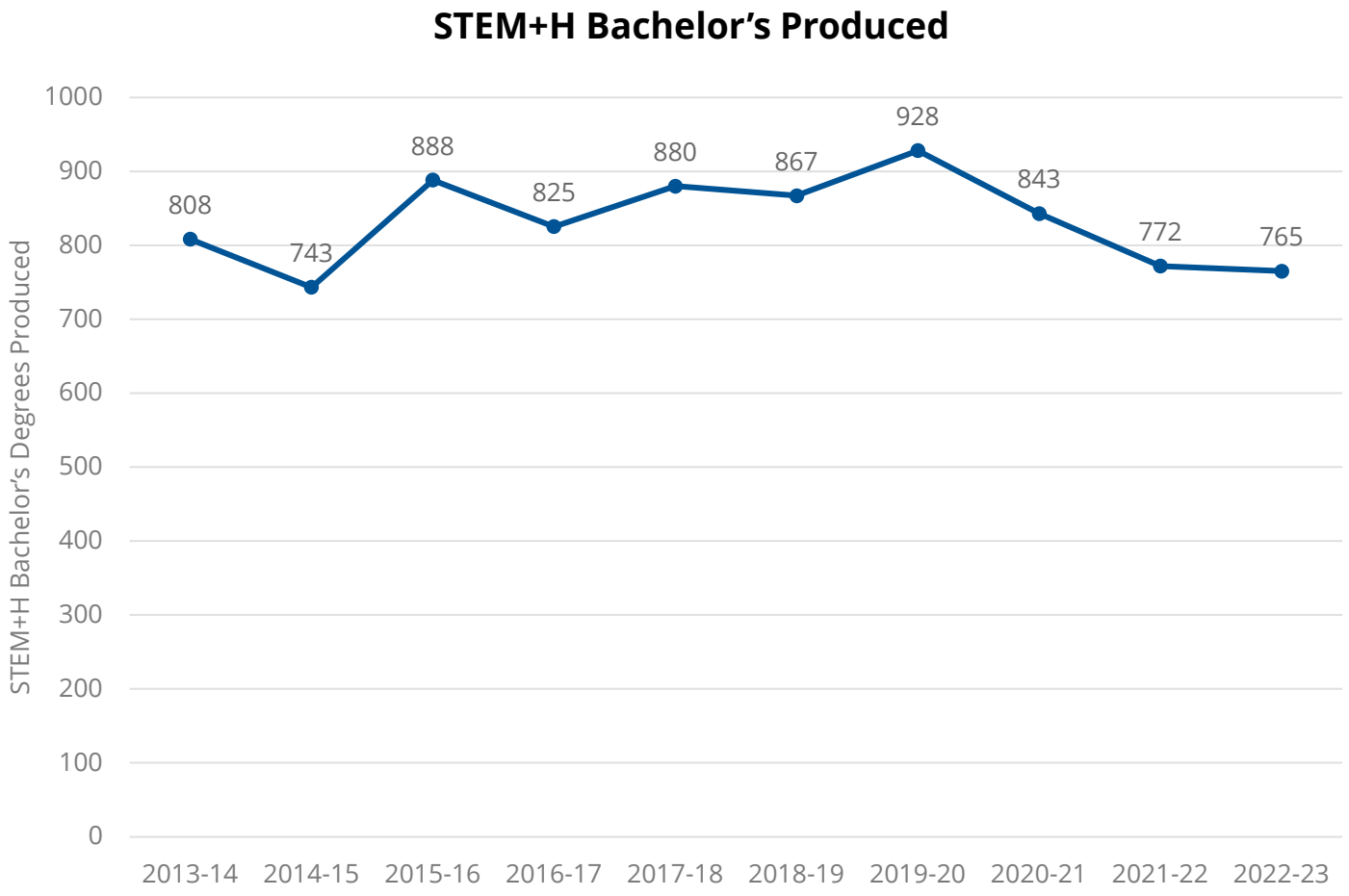
Primary Reserve	Strength = ratio / .133 Strength = 10 if > 10 Strength = -4 if < -4 Weight = .35 cfi = strength * weight
Net Operating Revenue	Strength = ratio /.013 Strength = 10 if > 10 Strength = -4 if < -4 Weight = .10 cfi = strength * weight
Return on Net Assets	Strength = ratio /.02 Strength = 10 if > 10 Strength = -4 if < -4 Weight = .20 ratio = strength * weight
Viability	Strength = 10 if denominator = 0 Strength = ratio /.417 Strength = 10 if > 10 Strength = -4 if < -4 Weight = .35 cfi = strength * weight

Financial Ratios

Primary Reserve Ratio Calculation:		Data	Strength	Weight	CFI
Institution unrestricted net assets	+	43,008,781.0			
Institution expendable restricted net assets	+	457,148.0			
C.U. unrestricted net assets	+	71,219,468.0			
C.U. temporary restricted net assets	+	189,653,437.0			
C.U. net investment in plant	-	143,224,691.0			
Numerator Total		161,114,143.0			
Institution operating expenses	+	323,289,155.0			
Institution non-operating expenses	+	6,642,177.0			
C.U. total expenses	+	37,869,361.0			
Denominator Total		367,800,693.0			
Primary Reserve Ratio =	÷	**0.44**	**3.29**	**0.35**	**1.15**
Net Operating Revenue Ratio Calculation:					
Institution operating income (loss)	+	(177,455,198.0)			
Institution net non-operating revenues	+	152,446,080.0			
C.U. change in unrestricted net assets	+	5,432,783.0			
Numerator Total		(19,576,335.0)			
Institution operating revenues	+	145,833,957.0			
Institution non-operating revenues	+	152,446,080.0			
C.U. total unrestricted revenues	+	47,355,435.0			
Denominator Total		345,635,472.0			
Net Operating Revenue Ratio =	÷	**-0.06**	**-4.00**	**0.10**	**-0.40**
Return on Net Assets Ratio Calculation:					
Change in net assets + C.U. change in net assets		(4,116,051.0)			
Total net assets + C.U. total net assets (beginning of year)		405,260,639.0			
Return on Net Assets Ratio =	÷	**-0.01**	**-0.51**	**0.20**	**-0.10**
Viability Ratio Calculation:					
Expendable net assets **Numerator Total =**		161,114,143.0			
Institution long-term debt (total project related debt)	+	147,924,079.0			
C.U. long-term debt (total project related debt)	+	109,730,686.0			
Denominator Total		257,654,765.0			
Viability Ratio =	÷	**0.63**	**1.50**	**0.35**	**0.52**
COMPOSITE FINANCIAL INDICATOR SCORE (CFI)					**1.18**

Sources: WKU State Audited Financial Statements; Higher Learning Commission CFI Worksheet

Current State Performance on the Comprehensive Funding Model



5% WKU

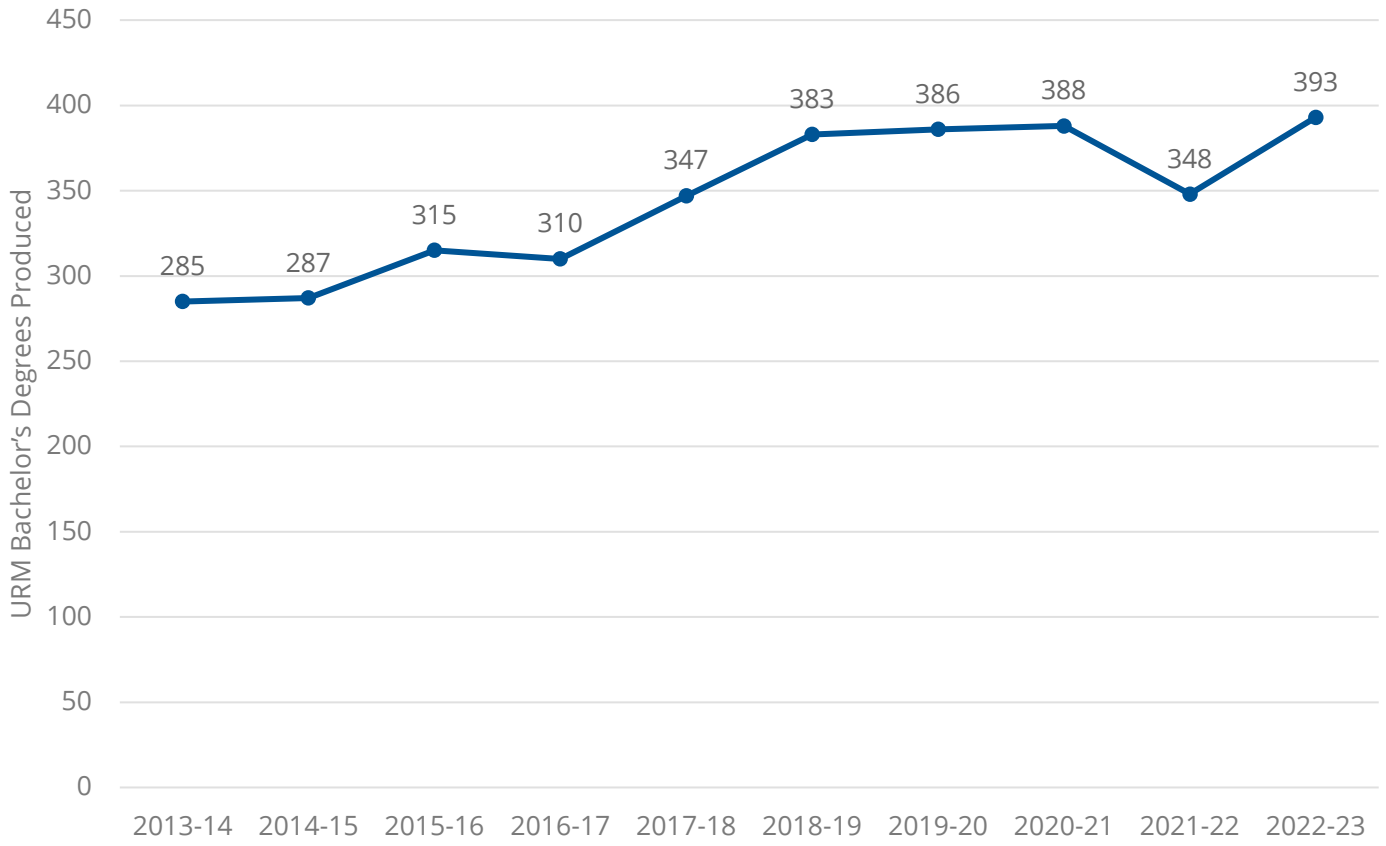
7% KY Comps[1]

number of STEM+H Bachelor's produced from 2013-14 to 2022-23

Note: 1) KY Comps refers to all six Kentucky public comprehensive universities: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University. Source: Funding Model Outcomes provided by CPE.

Current State Performance on the Comprehensive Funding Model

Underrepresented Minority Student (URM) Bachelor's Produced[1]

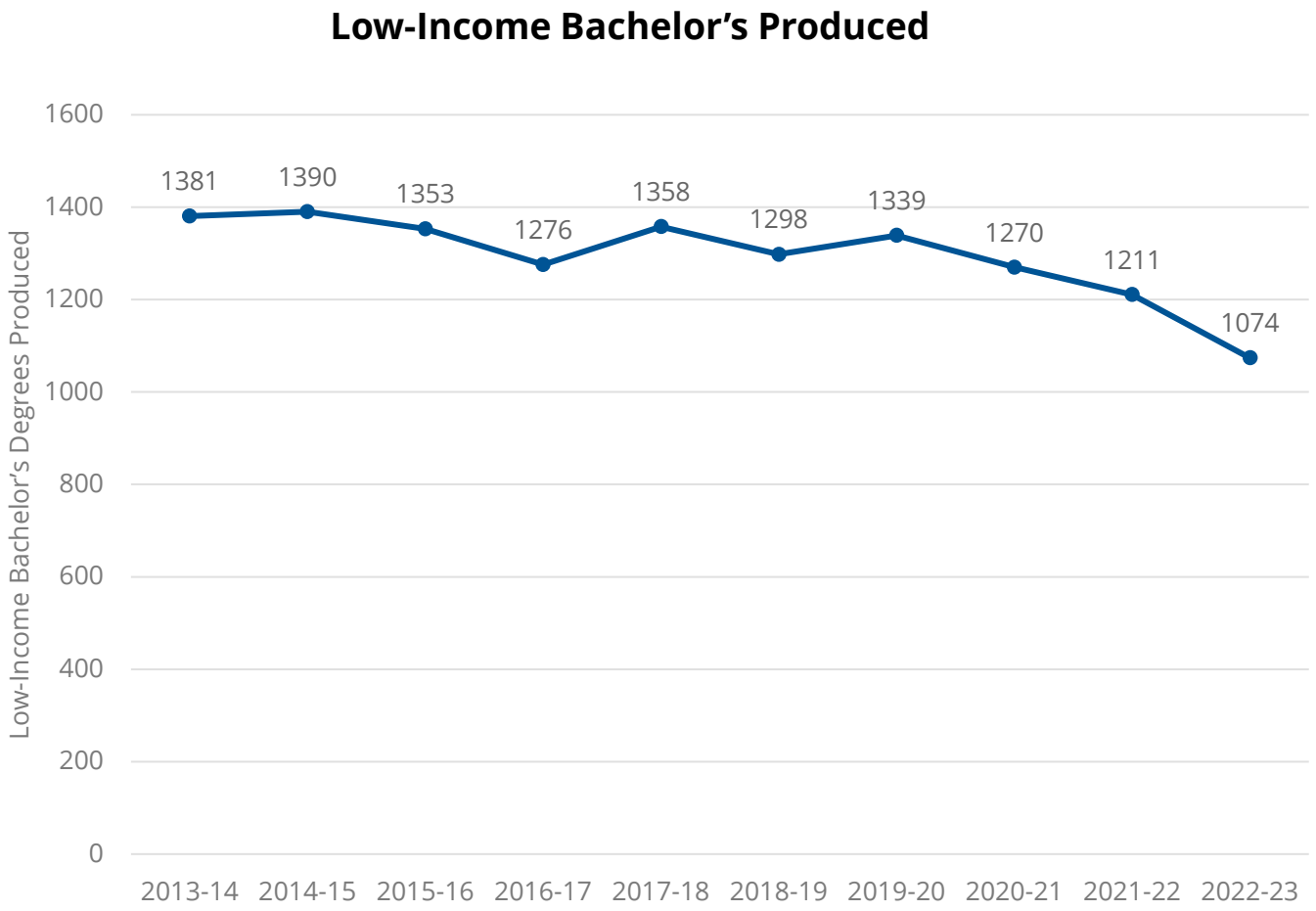


38% WKU | **23%** KY Comps

number of URM Bachelor's produced from 2013-14 to 2022-23

Note: 1) The URM Bachelor's Degrees metric has been amended to "underrepresented students", defined as "first generation college students", for the 2024-25 funding distribution.

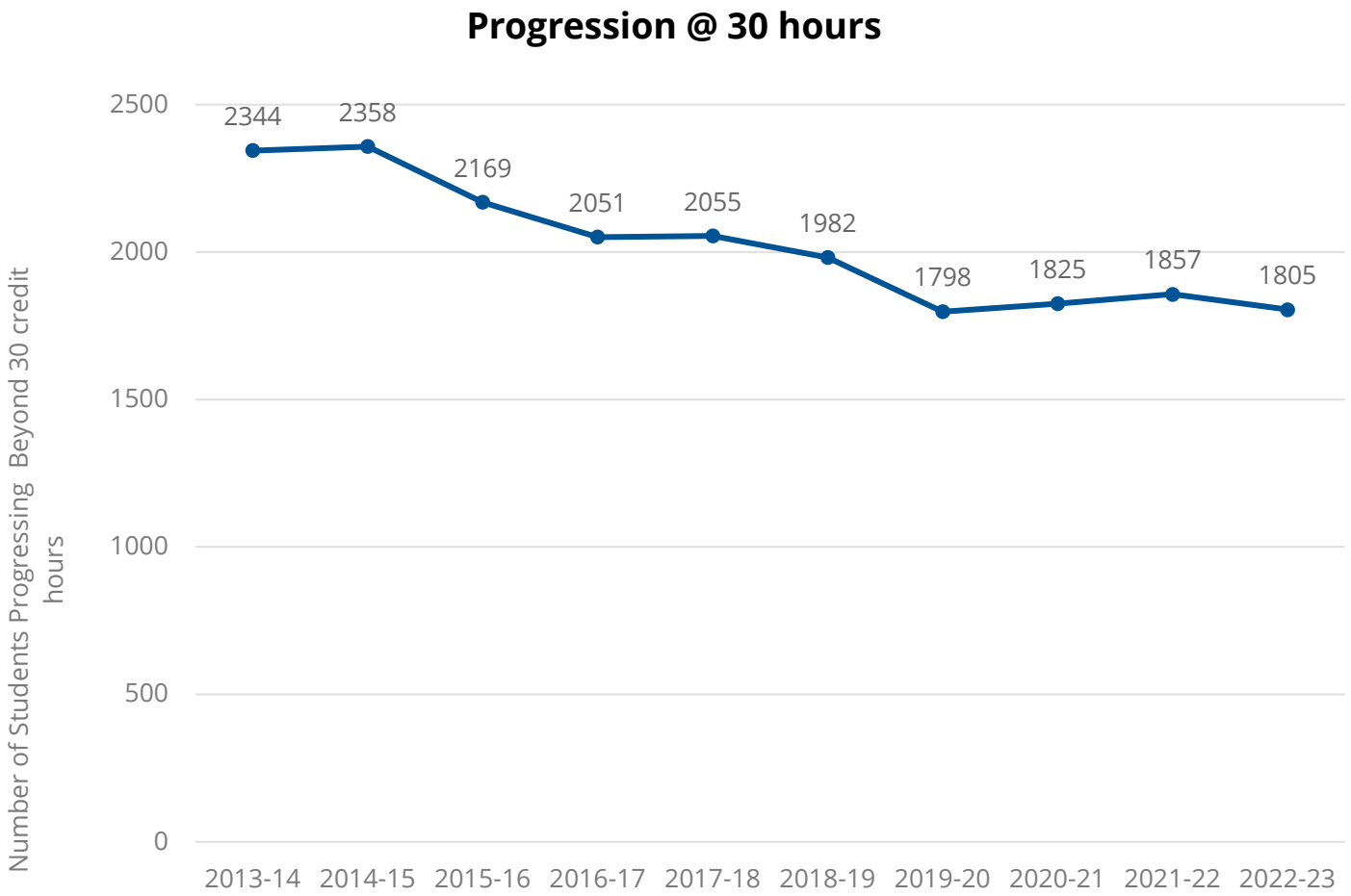
Current State Performance on the Comprehensive Funding Model



22% WKU | **15%** KY Comps

number of Low-Income Bachelor's produced from 2013-14 to 2022-23

Current State Performance on the Comprehensive Funding Model



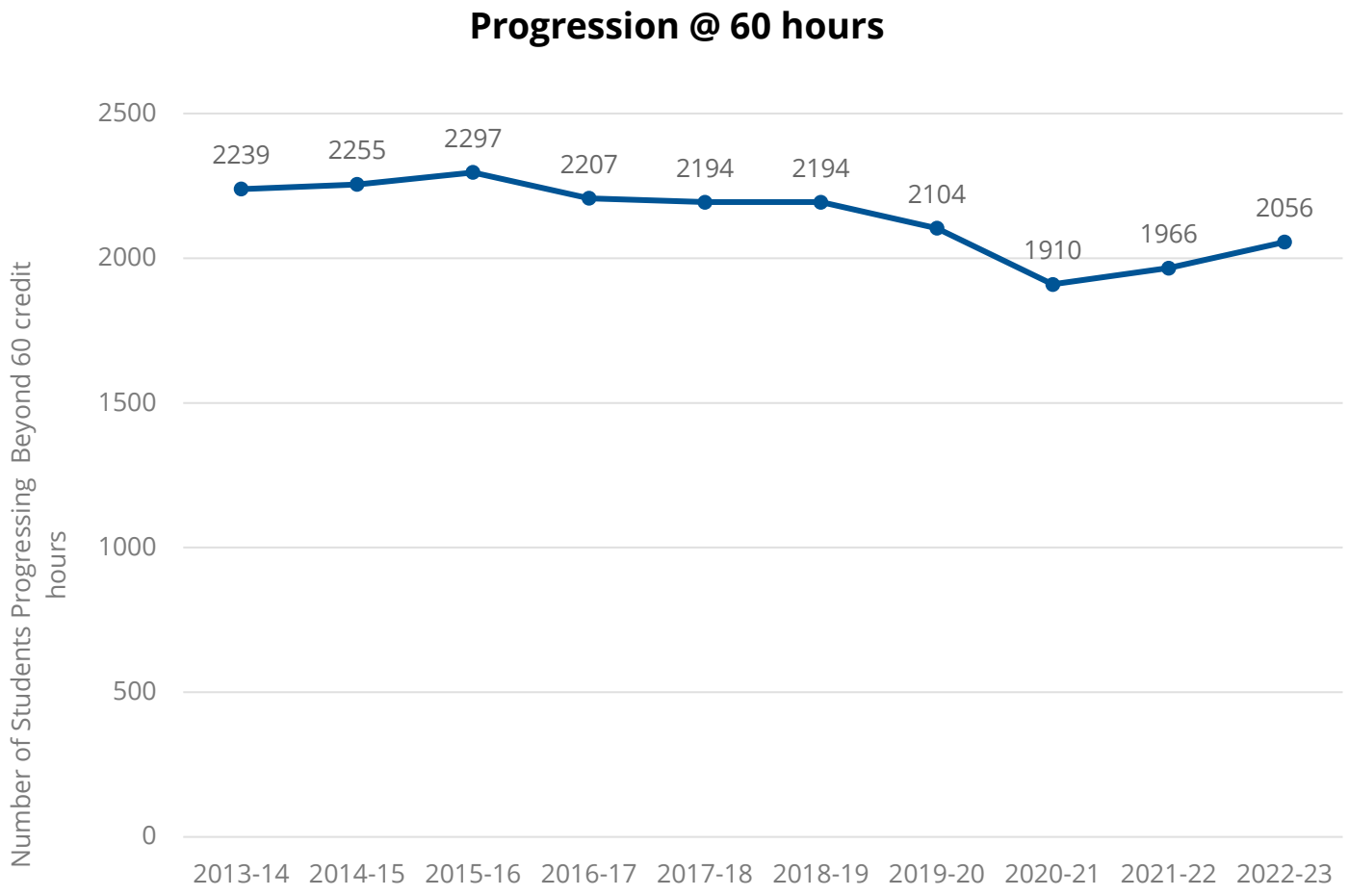
23% WKU

20% KY Comps[1]

number of undergraduate students @ 30 hours from 2013-14 to 2022-23

Note: 1) KY Comps refers to all six Kentucky public comprehensive universities: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University. Source: Funding Model Outcomes provided by CPE.

Current State Performance on the Comprehensive Funding Model

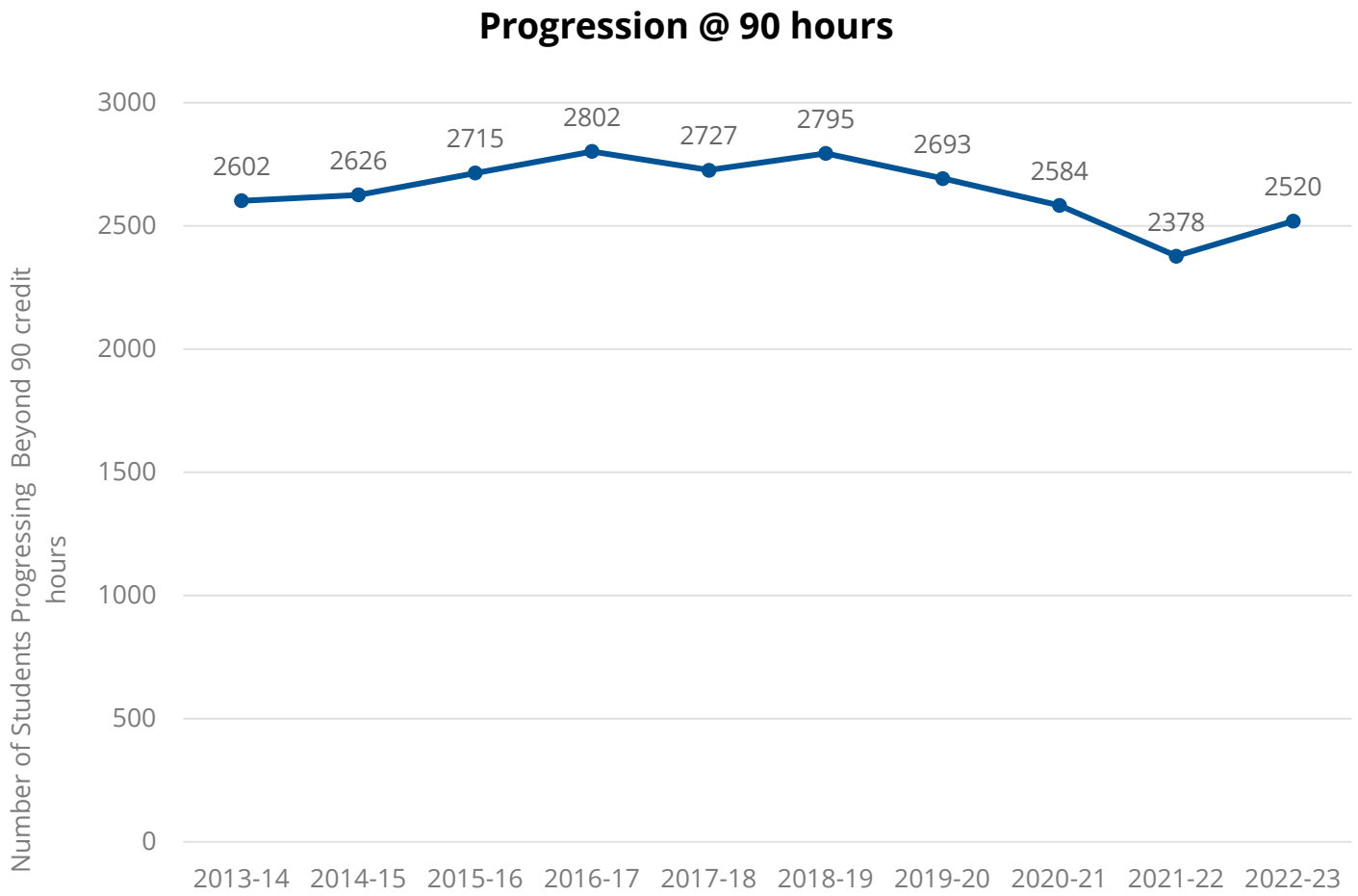


8% WKU

15% KY Comps

number of undergraduate students @ 60 hours produced from 2013-14 to 2022-23

Current State Performance on the Comprehensive Funding Model

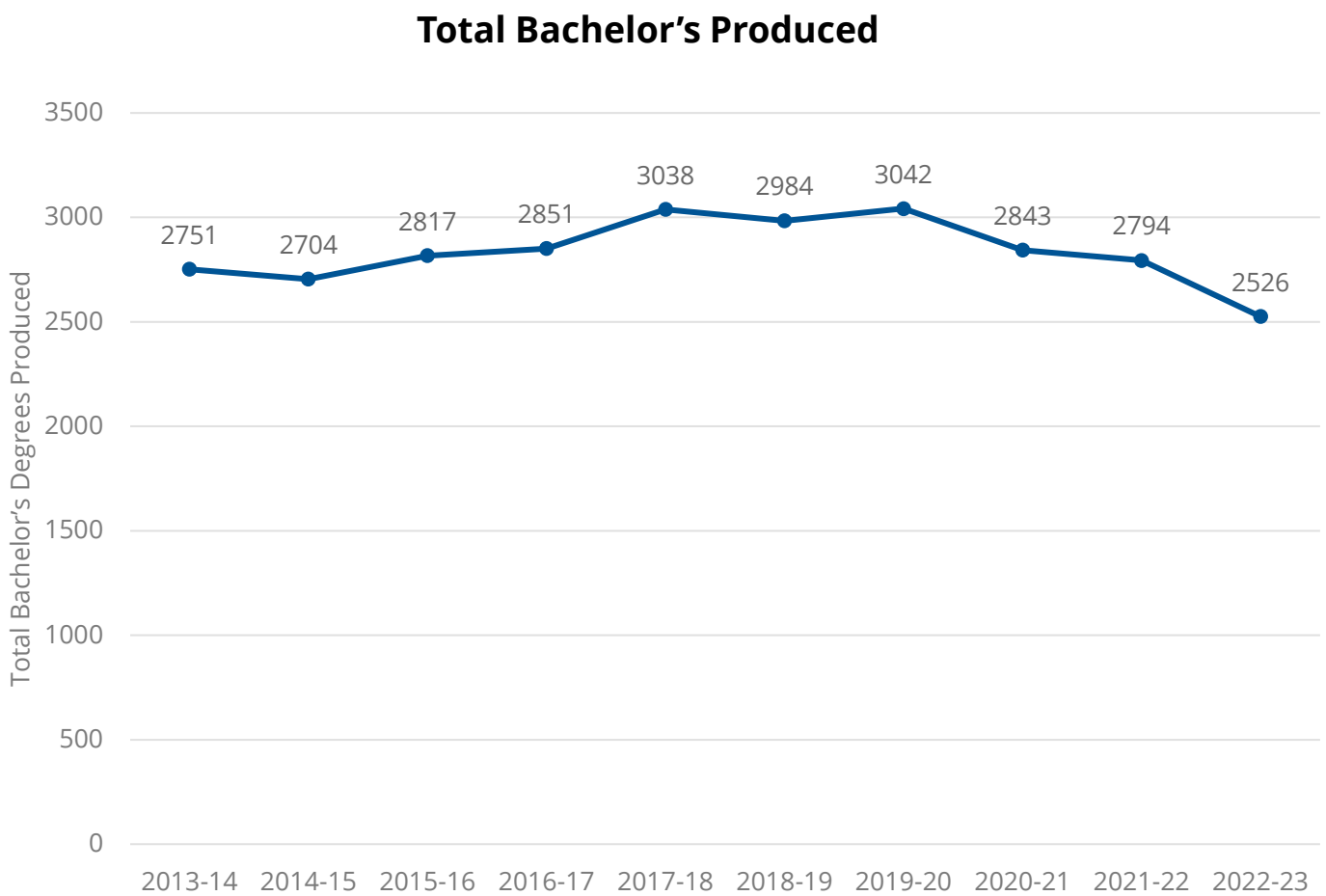


3% WKU

11% KY Comps

number of undergraduate students @ 90 hours from 2013-14 to 2022-23

Current Performance on the Comprehensive Funding Model



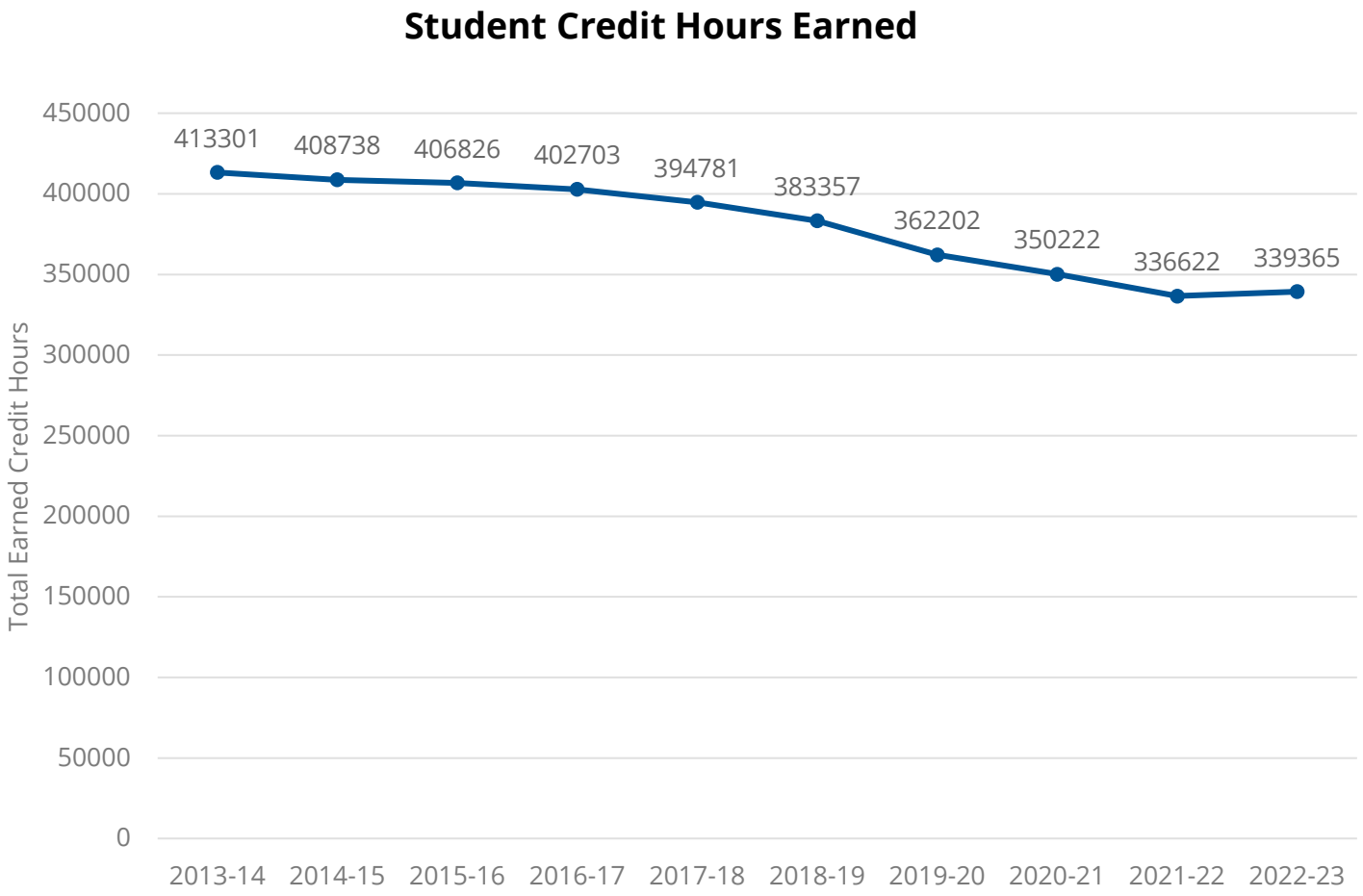
8% WKU

8% KY Comps[1]

number of Total Bachelor's produced from 2013-14 to 2022-23

Note: 1) KY Comps refers to all six Kentucky public comprehensive universities: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University. Source: Funding Model Outcomes provided by CPE.

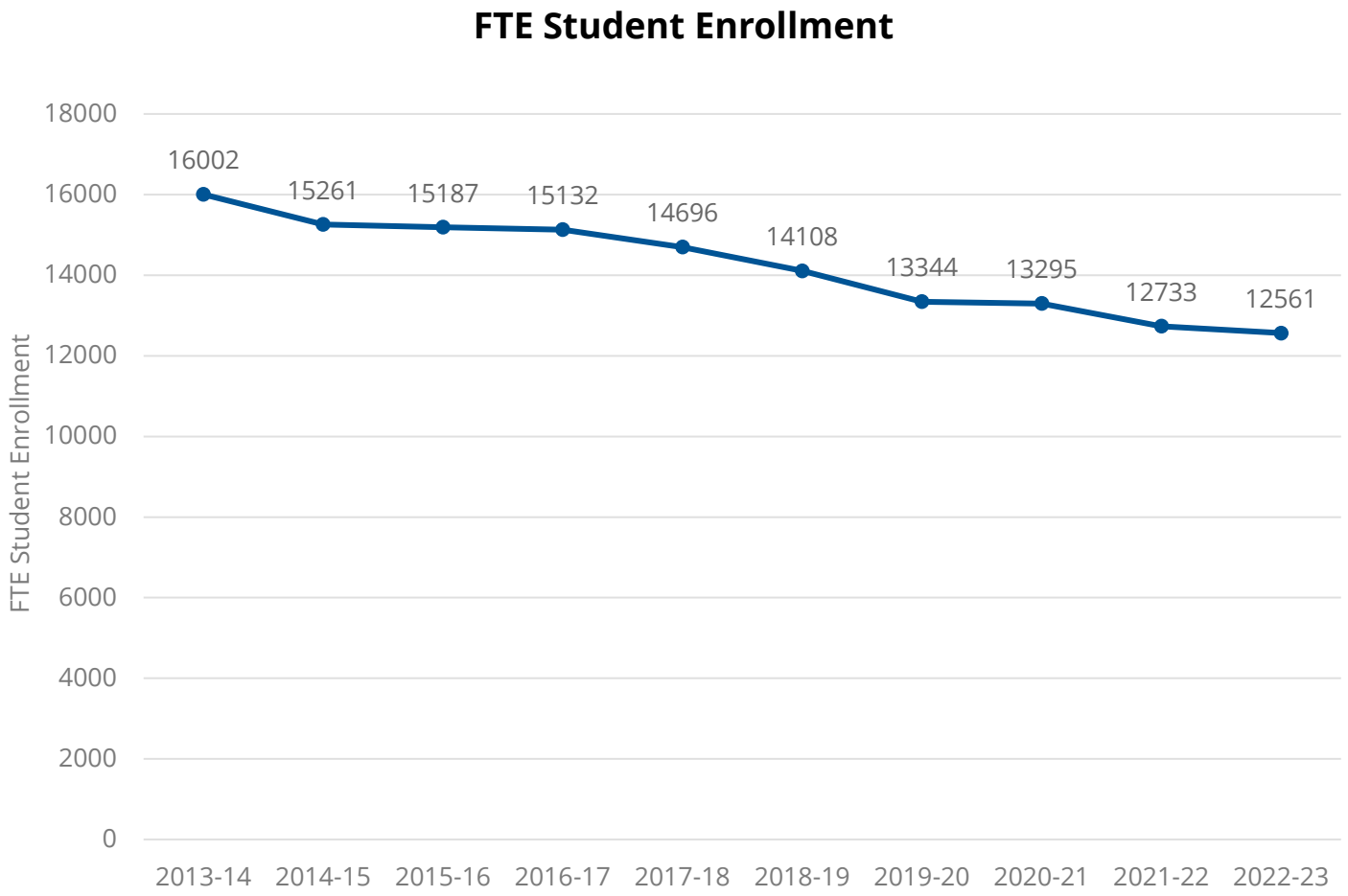
Current Performance on the Comprehensive Funding Model



18% WKU | **16%** KY Comps

number of Student Credit Hours earned from 2013-14 to 2022-23

Current Performance on the Comprehensive Funding Model



22% WKU

21% KY Comps

number of FTE Student Enrollment from 2013-14 to 2022-23

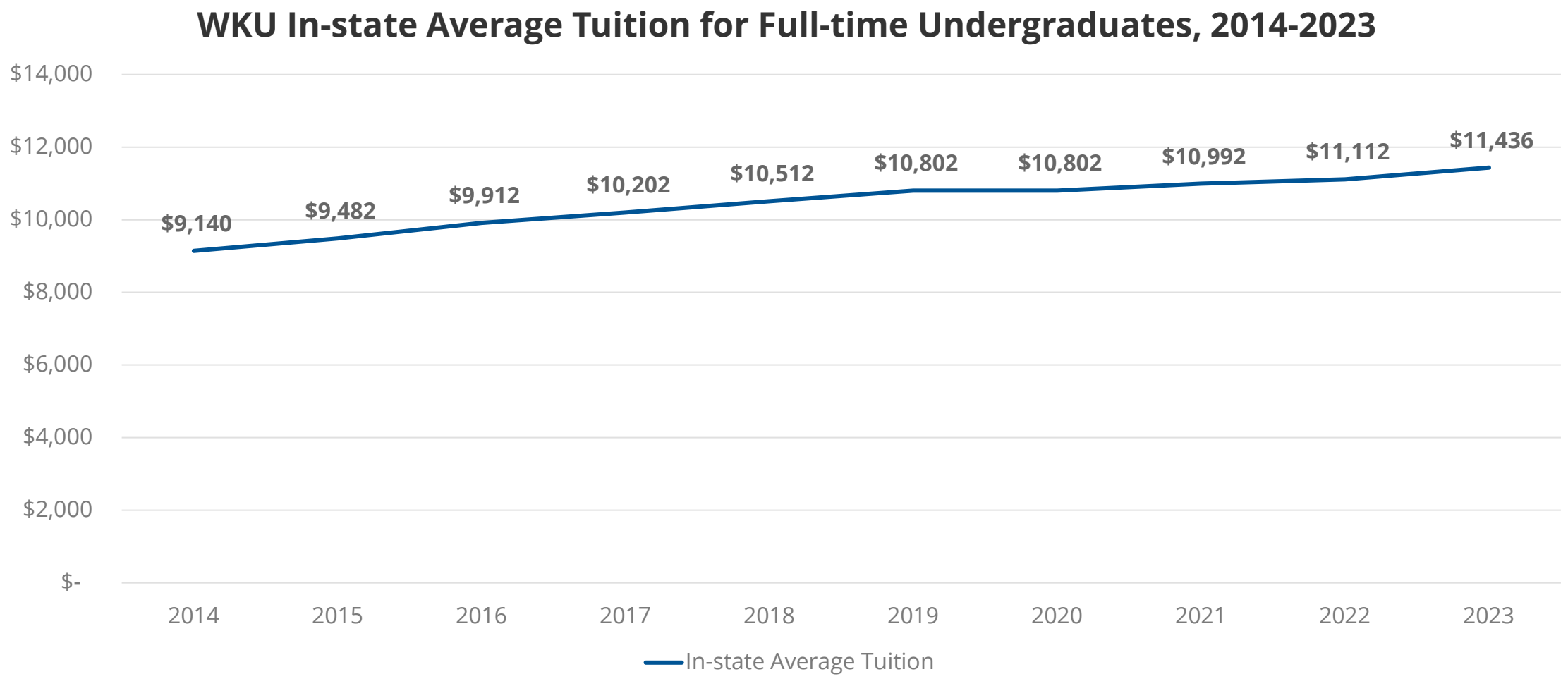
Financial Model Driving Assumptions | Other Expenses (Detailed)

WKU stakeholder discussions, proposal and related materials, and peer / market research inform the drivers behind the financial model.

Line Item	Forecast Approach	Moderate Driver	Conservative Driver
Marketing, Program Development, and Curriculum Design	WKU Proposal and Related Materials	WKU provided rates and indicated that costs will be zero or near zero after Year 0. WKU indicated that 100% of marketing, program development, and curriculum design expense totals will be funded by internal reallocations from the Provost's Strategic Initiative Fund.	Same assumptions as moderate model.
Library	WKU Proposal and Related Materials	Incorporates annual rates indicated by WKU.	Same assumptions as moderate model.
Travel	WKU Proposal and Related Materials	WKU estimated travel totals at $20,000 per year, regardless of personnel or enrollment totals. Model instead treats travel expenses as variable, with rates of $1,000 per faculty, administrator, and student. This averages $20,000 per year over Years 1-5 before annual increases for inflation. Staff travel is budgeted at $0.00. Assume costs in excess of this amount would be billed to faculty start-up funds and/or central university Graduate Student Travel & Research grants.	Same assumptions as moderate model.
Equipment	WKU Proposal and Related Materials	Incorporates annual rates indicated by WKU.	
Facilities	WKU Proposal and Related Materials	Assume that facilities expenses will be $0. WKU indicated that existing spaces on campus will be repurposed to support the program and therefore no additional facilities expenses will be necessary.	Same assumptions as moderate model.
Other Operating Expenses	WKU Proposal and Related Materials	Incorporates annual rates indicated by WKU.	Same assumptions as moderate model.

Historical Tuition Rates

Annual tuition increases in the WKU financial projections were based on the Compound Annual Growth Rate (CAGR) of 2.5% for WKU's in-state tuition rates from 2014 through 2023.



Sources: IPEDS Data Center.

Workforce Alignment Methodology

The project team assessed trends in the Kentucky labor market compared to the associated occupations for Data Sciences programs to understand how the proposed program aligns to the needs of the region and the state.

Methodology:

- Evaluated national and Kentucky labor market demand, including historical demand and long-term employment projections for occupational groups into 2032
- Analyzed workforce projections for Standard Occupational Classification (SOC) codes aligned to relevant academic program Classification of Instructional Program (CIP) codes using the NCES CIP-SOC Crosswalk

The following Data Sciences CIP Codes…

30.7001: Data Sciences, General

30.7099: Data Sciences, Other

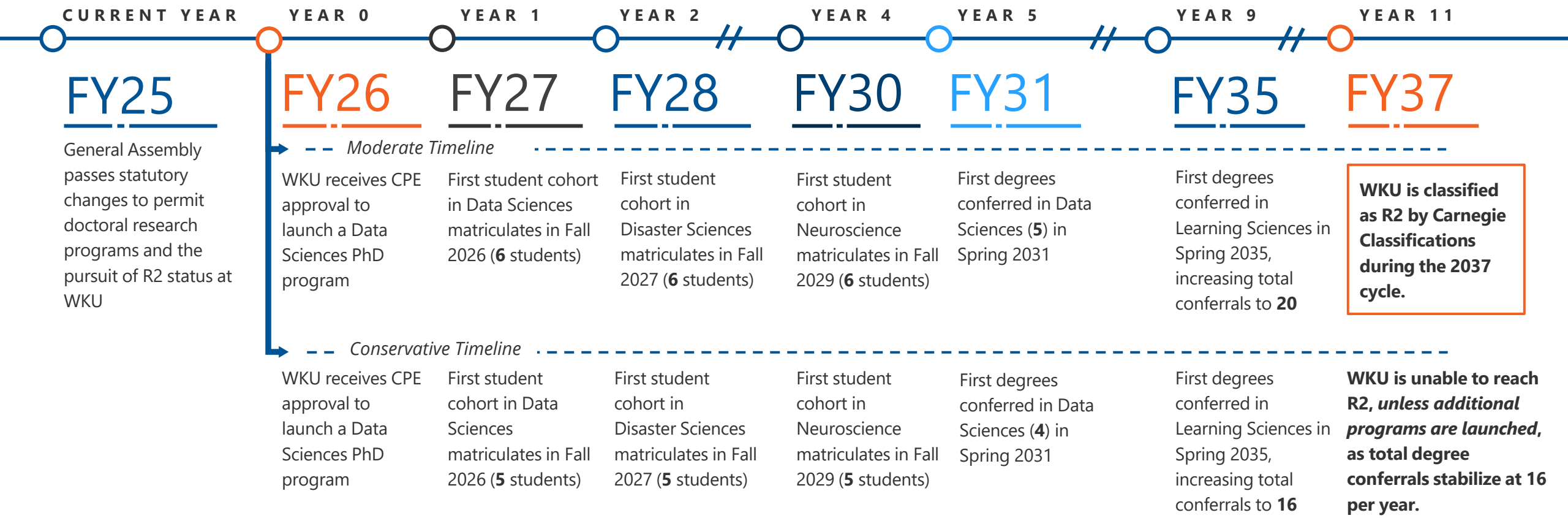
…are aligned with the following SOC codes (occupations).

- 11-3021 Computer and Information Systems Managers
- 11-9121 Natural Sciences Managers
- 15-1221 Computer and Information Research Scientists
- 15-1243 Database Architects
- 15-1252 Software Developers[1]
- 15-2041 Statisticians
- 15-2051 Data Scientists
- 25-1199 Postsecondary Teachers, All Other

Notes: 1) CIP-SOC Crosswalk for Data Sciences includes 12-1252 Software Developers, which is also associated with the following 2010 and 2018 SOC Codes:. 15-1132: Software Developers, Applications, 15-1133: Software Developers, Systems Software, 15-1256: Software Developers and Software Quality Assurance Analysts and Testers. Sources: Bureau of Labor Statistics Occupational Employment and Wage Statistics; Bureau of Labor Statistics Occupation Profiles; Kentucky Center for Statistics Employment and Wages by Occupation; NCES CIP-SOC Crosswalk; Projections Central Long-Term Projections.

R2 Pursuit Implementation Timeline

If approved, the success of WKU's pursuit of an R2 Carnegie Classification will depend on the size of the doctoral research programs; under moderate assumptions, WKU will be classified as R2 during the 2037 Carnegie Classification cycle.



Proposed timelines above were developed using key activities and dates outlined by WKU but include adjustments as determined appropriate for timeline feasibility. Additionally, this timeline is our best assessment based on available information and may change as a result of unforeseen circumstances and/or program assumption adjustments.

Detailed Moderate R2 Timeline

Under moderate assumptions, WKU will be able to reach R2 status by the 2037 Carnegie Classifications cycle.

To reach R2, WKU must confer at least 20 doctoral degrees a year

Moderate Timeline for WKU's Pursuit of R2													
	FY26^	**FY27**	**FY28***	**FY29^**	**FY30**	**FY31***	**FY32^**	**FY33**	**FY34***	**FY35^**	**FY36**	**FY37***	**FY38^**
Data Sciences													
Enrollment		6	12	18	24	29	29	29	29	29	29	29	29
Degrees						5	5	5	5	5	5	5	5
Disaster Sciences													
Enrollment			6	12	18	24	29	29	29	29	29	29	29
Degrees							5	5	5	5	5	5	5
Neuroscience													
Enrollment					6	12	18	24	29	29	29	29	29
Degrees									5	5	5	5	5
Learning Sciences													
Enrollment						6	12	18	24	29	29	29	29
Degrees										5	5	5	5
Total Degrees	0	0	0	0	0	5	10	10	15	20	20	20	20

Legend

^ : last year data collected for upcoming Carnegie cycle
*: Carnegie classifications released

The last year data is collected is two years before each classification cycle (e.g., for the 2025 classification cycle, 2022-23 is the last year data is collected).

Moderate Assumptions:

- 5-year program
- 6 new students per year until 29 total enrollment
- 20% attrition rate
- Expected launch years provided by WKU

Using moderate assumptions, WKU will reach R2 status by the 2037 Carnegie Classification cycle.

Detailed Conservative R2 Timeline

Without adding an additional fifth PhD programs, WKU will be unable to reach R2 under conservative assumptions.

To reach R2, WKU must confer at least 20 doctoral research degrees a year

Conservative Timeline for WKU's Pursuit of R2													
	FY26^	**FY27**	**FY28***	**FY29^**	**FY30**	**FY31***	**FY32^**	**FY33**	**FY34***	**FY35^**	**FY36**	**FY37***	**FY38^**
Data Sciences													
Enrollment		5	10	15	20	24	24	24	24	24	24	24	24
Degrees						4	4	4	4	4	4	4	4
Disaster Sciences													
Enrollment			5	10	15	20	24	24	24	24	24	24	24
Degrees							4	4	4	4	4	4	4
Neuroscience													
Enrollment					5	10	15	20	24	24	24	24	24
Degrees									4	4	4	4	4
Learning Sciences													
Enrollment						5	10	15	20	24	24	24	24
Degrees										4	4	4	4
Total Degrees	0	0	0	0	0	4	8	8	12	16	16	16	16

Legend

^ : last year data collected for upcoming Carnegie cycle
*: Carnegie classifications released

The last year data is collected is two years before each classification cycle (e.g., for the 2025 classification cycle, 2022-23 is the last year data is collected).

Conservative Assumptions:

- 5-year program
- 5 new students per year until 24 total enrollment
- 35% attrition rate
- Expected launch years provided by WKU

Using conservative assumptions, WKU will not reach R2 with the current four proposed PhD programs.

Appendix | Kentucky State University

KSU Campus Visits and Virtual Interview

On 9/23/24, the project team visited the Kentucky State University Campus and met with the following stakeholders.

Meeting Time (EST)	Participants
University Leaders & Agroecology Leadership (12:00 – 1:30 PM)	• Michael D. Dailey – Provost and Vice President of Academic Affairs • Maheteme Gebremedhin – Acting Chair, School of Agriculture and Natural Resources • Marcus Bernard – Dean of the College of Agriculture, Health and Natural Resources & Director of Land-Grant Programs • Buddhi Gywali – Interim Director, Graduate Studies & Professor Geospatial Applications, Human Dimensions and Climate Studies
President Akakpo (2:00 -3:00 PM)	• President Koffi Akakpo
Relevant Faculty (3:00 – 4:30 PM)	• Rita Sharma – Associate Professor of Chemistry • Jyotica Batra – Assistant Professor of Physics • Andrew Ray – Associate Professor of Aquaculture Production • Suraj Upadhaya – Assistant Professor of Sustainable Systems • Anuj Chiluwal – Assistant Professor of Agronomy

On 10/4/24, the project team conducted a virtual interview with the following stakeholders.

Meeting Time (EST)	Participants
Relevant Faculty (9:00 – 9:30 AM)	• Kirk Pomper – Professor, School of Agriculture, Communities, and the Environment • Bruce Griffis – Assistant Professor of Biology

KSU HBCU/Land-Grant Peers

The institutions listed below have both Land-Grant and HBCU status, making them mission-similar peers to Kentucky State University.

- Alabama A & M University
- Alcorn State University
- Central State University
- Delaware State University
- Florida Agricultural and Mechanical University
- Fort Valley State University
- Langston University
- Lincoln University
- North Carolina A & T State University
- Prairie View A & M University
- South Carolina State University
- Southern University and A & M College
- Southern University Law Center
- Tennessee State University
- Tuskegee University
- University of Arkansas at Pine Bluff
- University of Maryland Eastern Shore
- University of the District of Columbia
- University of the Virgin Islands
- Virginia State University
- West Virginia State University

Sources: IPEDS Data Center.

Agroecology Peer Programs

The institutions listed below were identified as a) doctoral programs under the CIP code 01.0308: Agroecology and Sustainable Agriculture or b) opportunities within doctoral programs to study agroecology or sustainable agriculture (concentration, focus, etc.).

Programs in CIP Code 01.0308: Agroecology and Sustainable Agriculture

- Iowa State University – Sustainable Agriculture
- Louisiana State University and Agricultural & Mechanical College – Plant, Environmental, and Soil Sciences
- Mississippi State University – program name unknown
- North Carolina A&T State University – Agricultural and Environmental Sciences, concentration in Sustainable Agriculture
- Southern Illinois University-Carbondale – Agricultural Sciences

Similar Doctoral Programs

- Cornell University – Soil and Crop Sciences, focus in Agronomy
- Colorado State University – Soil and Crop Sciences, focus in Agroecology
- Delaware State University – Integrative Agriculture, Food and Environment Sciences
- Florida International University – Earth Systems Science, concentration in Agroecology
- Michigan State University – Crop and Soil Sciences, focus on Sustainable Agriculture
- Pennsylvania State University – Agricultural and Environmental Plant Science, focus on Agroecology
- North Carolina State University – Crop Science, focus on Sustainable Agriculture
- Oregon State University – Crop Science, focus on Sustainable Agriculture
- University of California, Davis – Horticulture and Agronomy with focus on Agroecology
- University of California, Santa Cruz – Environmental Studies, focus on Agroecology
- University of Florida – Concentration in Global Systems Agroecology
- University of Illinois Urbana-Champaign – Agroecology and Sustainable Agriculture Program
- University of Minnesota – Applied Plant Sciences, focus on Agroecology
- University of New Hampshire – Natural Resources and Earth Systems Science, focus on Sustainable Agriculture
- University of Vermont – Plant and Social Science, focus on Agroecology
- Washington State University – Crop Sciences, focus on Sustainable Agriculture

Sources: Institutions identified using publicly available data and IPEDS Data Center.

KSU Composite Financial Index (CFI) Calculation

KSU's CFI is calculated using the methodology outlined for public institutions by the Higher Learning Commission.

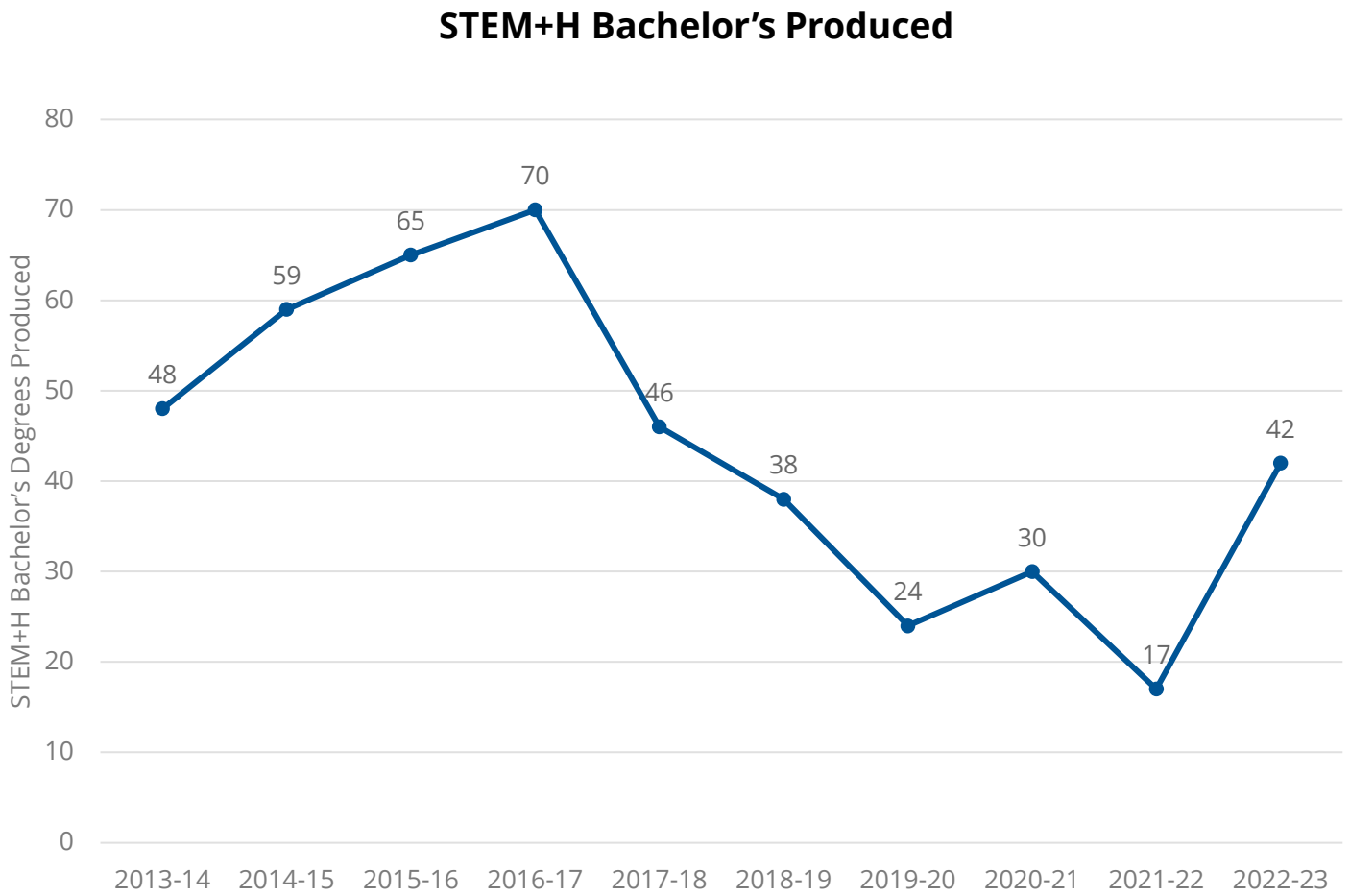
PUBLIC

Primary Reserve	Strength = ratio / .133 Strength = 10 if > 10 Strength = -4 if < -4 Weight = .35 cfi = strength * weight
Net Operating Revenue	Strength = ratio /.013 Strength = 10 if > 10 Strength = -4 if < -4 Weight = .10 cfi = strength * weight
Return on Net Assets	Strength = ratio /.02 Strength = 10 if > 10 Strength = -4 if < -4 Weight = .20 ratio = strength * weight
Viability	Strength = 10 if denominator = 0 Strength = ratio /.417 Strength = 10 if > 10 Strength = -4 if < -4 Weight = .35 cfi = strength * weight

Financial Ratios					
Primary Reserve Ratio Calculation:		**Data**	**Strength**	**Weight**	**CFI**
Institution unrestricted net assets	+	(19,250,207.0)			
Institution expendable restricted net assets	+	10,367,263.0			
C.U. unrestricted net assets	+	1,604,846.0			
C.U. temporary restricted net assets	+	10,669,081.0			
C.U. net investment in plant	-	0.0			
Numerator Total		3,390,983.0			
Institution operating expenses	+	78,527,900.0			
Institution non-operating expenses	+	5,872,029.0			
C.U. total expenses	+	1,336,879.0			
Denominator Total		85,736,808.0			
Primary Reserve Ratio =	÷	**0.04**	**0.30**	**0.35**	**0.10**
Net Operating Revenue Ratio Calculation:					
Institution operating income (loss)	+	(27,351,203.0)			
Institution net non-operating revenues	+	27,501,144.0			
C.U. change in unrestricted net assets	+	(885,347.0)			
Numerator Total		(735,406.0)			
Institution operating revenues	+	51,176,697.0			
Institution non-operating revenues	+	27,501,144.0			
C.U. total unrestricted revenues	+	451,532.0			
Denominator Total		79,129,373.0			
Net Operating Revenue Ratio =	÷	**-0.01**	**-0.71**	**0.10**	**-0.07**
Return on Net Assets Ratio Calculation:					
Change in net assets + C.U. change in net assets		(2,069,000.0)			
Total net assets + C.U. total net assets (beginning of year)		17,884,064.0			
Return on Net Assets Ratio =	÷	**-0.12**	**-4.00**	**0.20**	**-0.80**
Viability Ratio Calculation:					
Expendable net assets **Numerator Total =**		3,390,983.0			
Institution long-term debt (total project related debt)	+	96,130,526.0			
C.U. long-term debt (total project related debt)	+	0.0			
Denominator Total		96,130,526.0			
Viability Ratio =	÷	**0.04**	**0.08**	**0.35**	**0.03**
COMPOSITE FINANCIAL INDICATOR SCORE (CFI)					**-0.74**

Sources: KSU State Audited Financial Statements; Higher Learning Commission CFI Worksheet

Current State Performance on the Comprehensive Funding Model



13% KSU

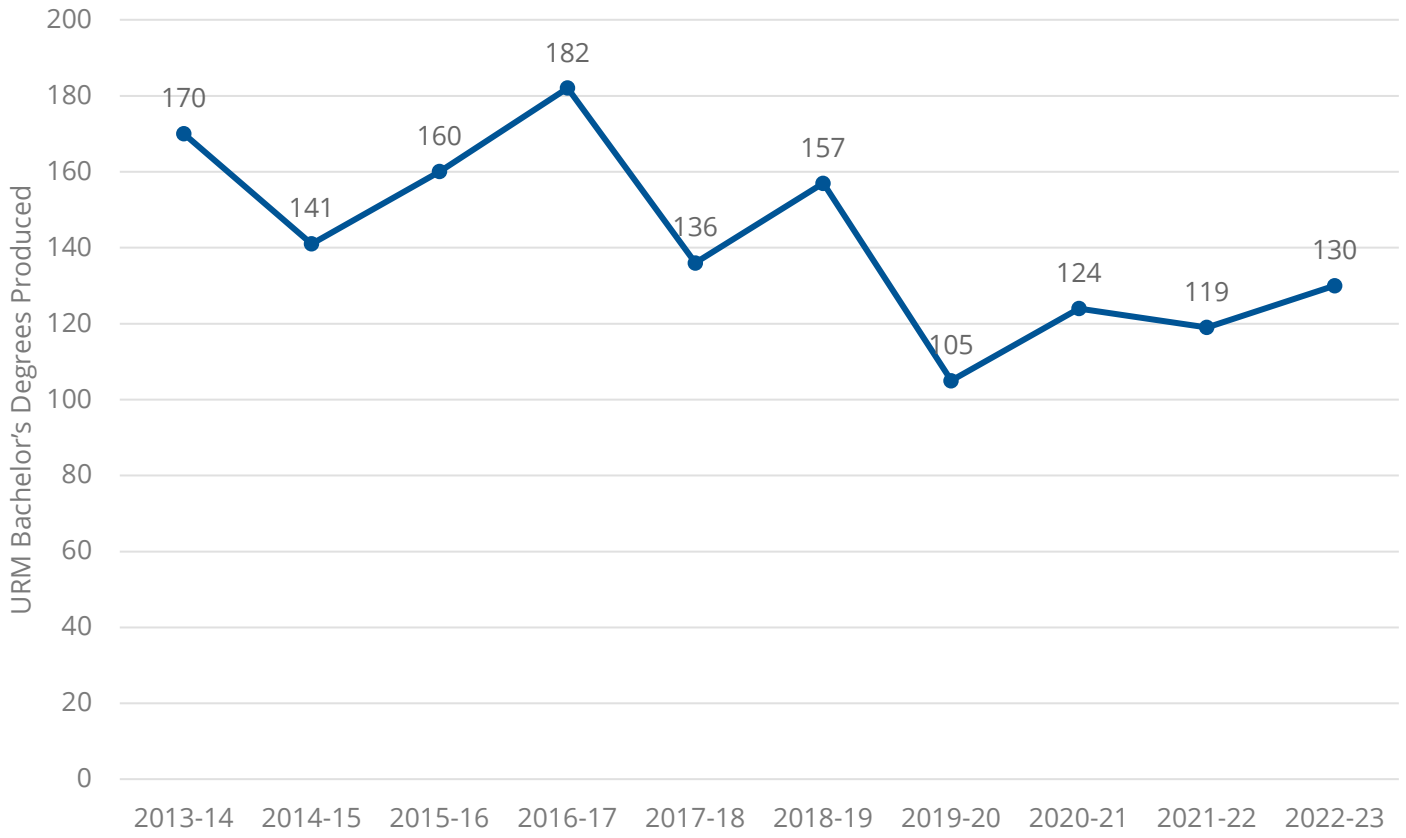
7% KY Comps[1]

number of STEM+H Bachelor's produced from 2013-14 to 2022-23

Note: 1) KY Comps refers to all six Kentucky public comprehensive universities: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University. Source: Funding Model Outcomes provided by CPE.

Current State Performance on the Comprehensive Funding Model

Underrepresented Minority Student (URM) Bachelor's Produced[1]



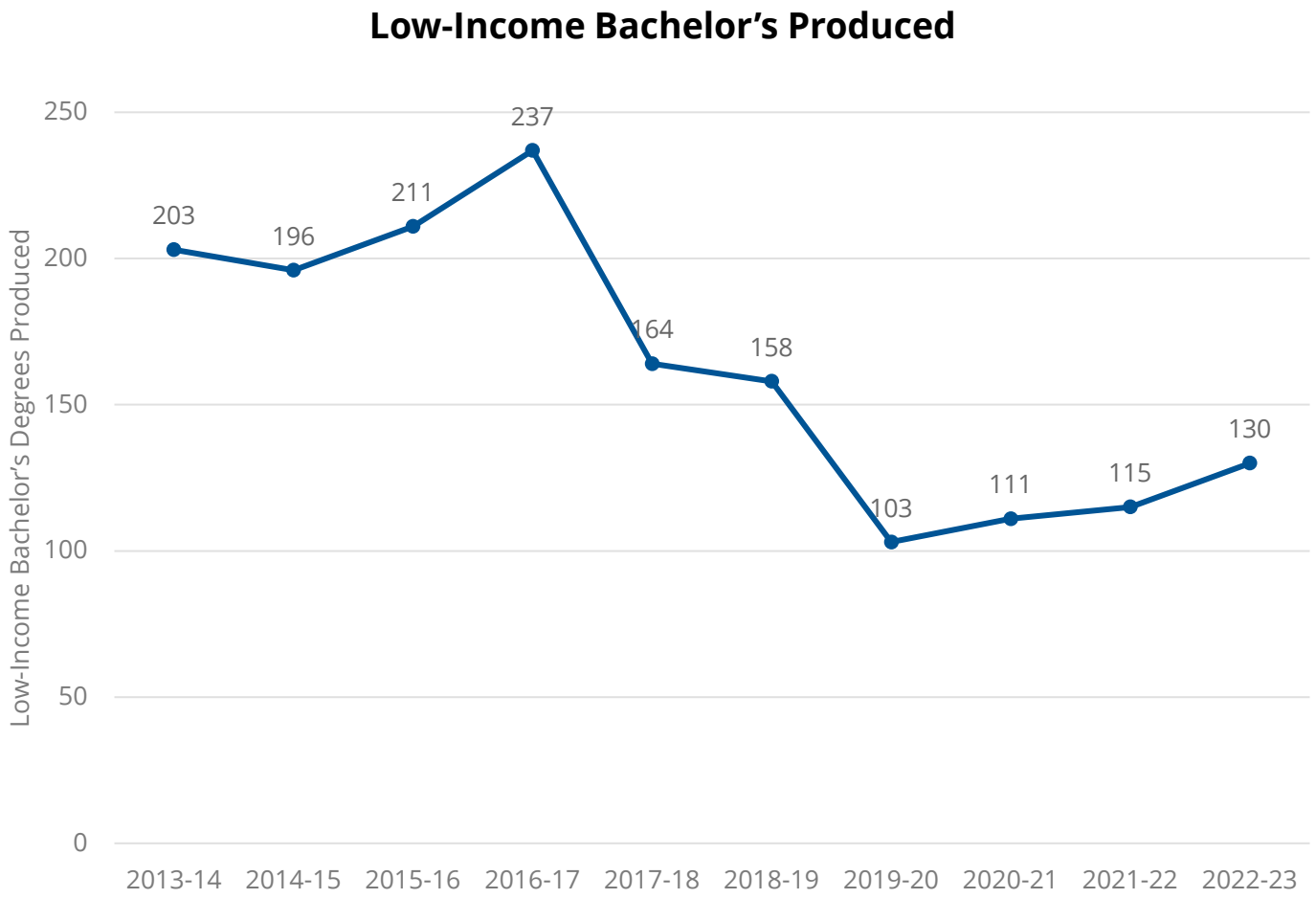
24% KSU

23% KY Comps

number of URM Bachelor's produced from 2013-14 to 2022-23

Note: 1) The URM Bachelor's Degrees metric has been amended to "underrepresented students", defined as "first generation college students", for the 2024-25 funding distribution.

Current State Performance on the Comprehensive Funding Model

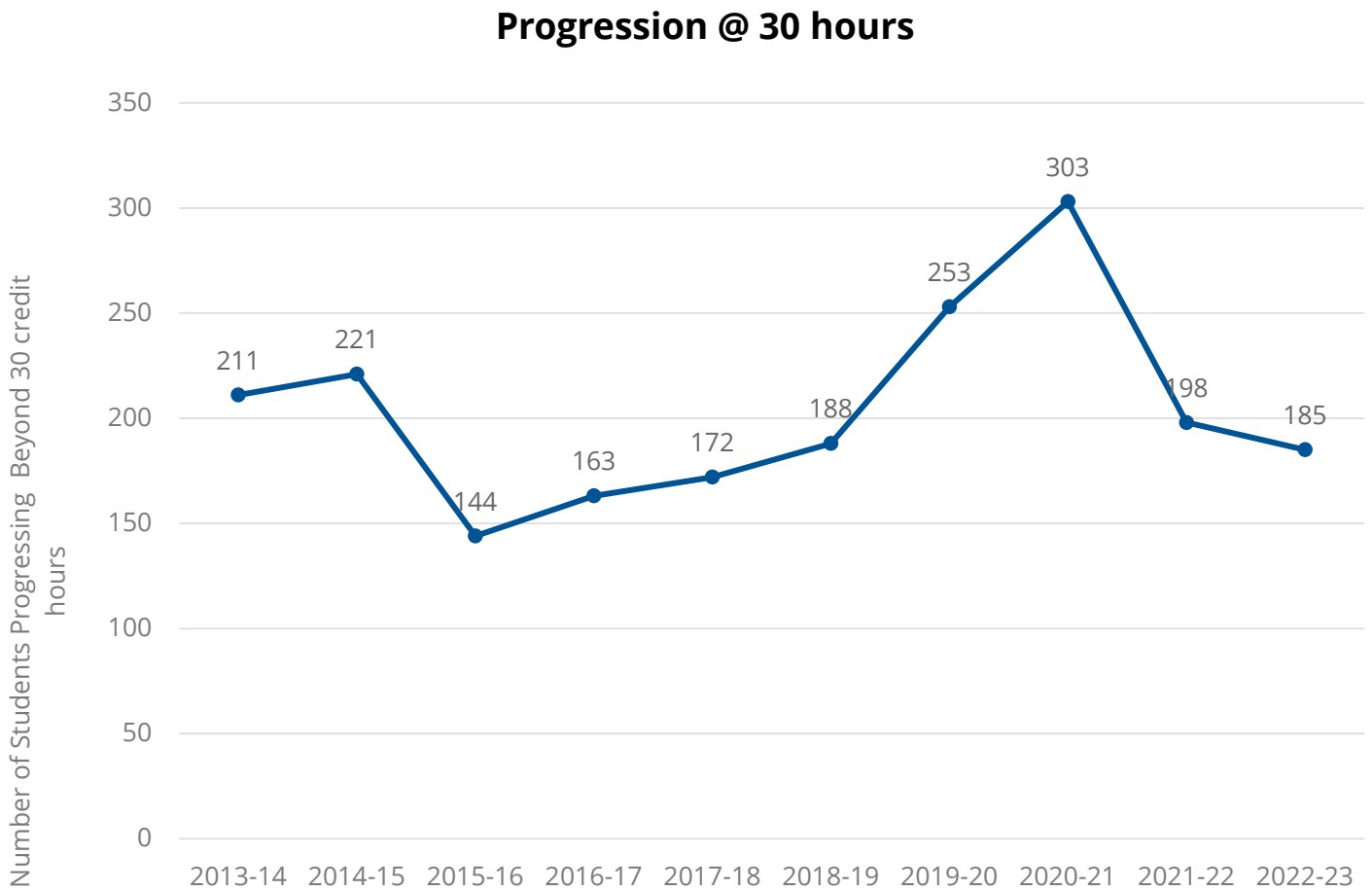


36% KSU

15% KY Comps

number of Low-Income Bachelor's produced from 2013-14 to 2022-23

Current State Performance on the Comprehensive Funding Model



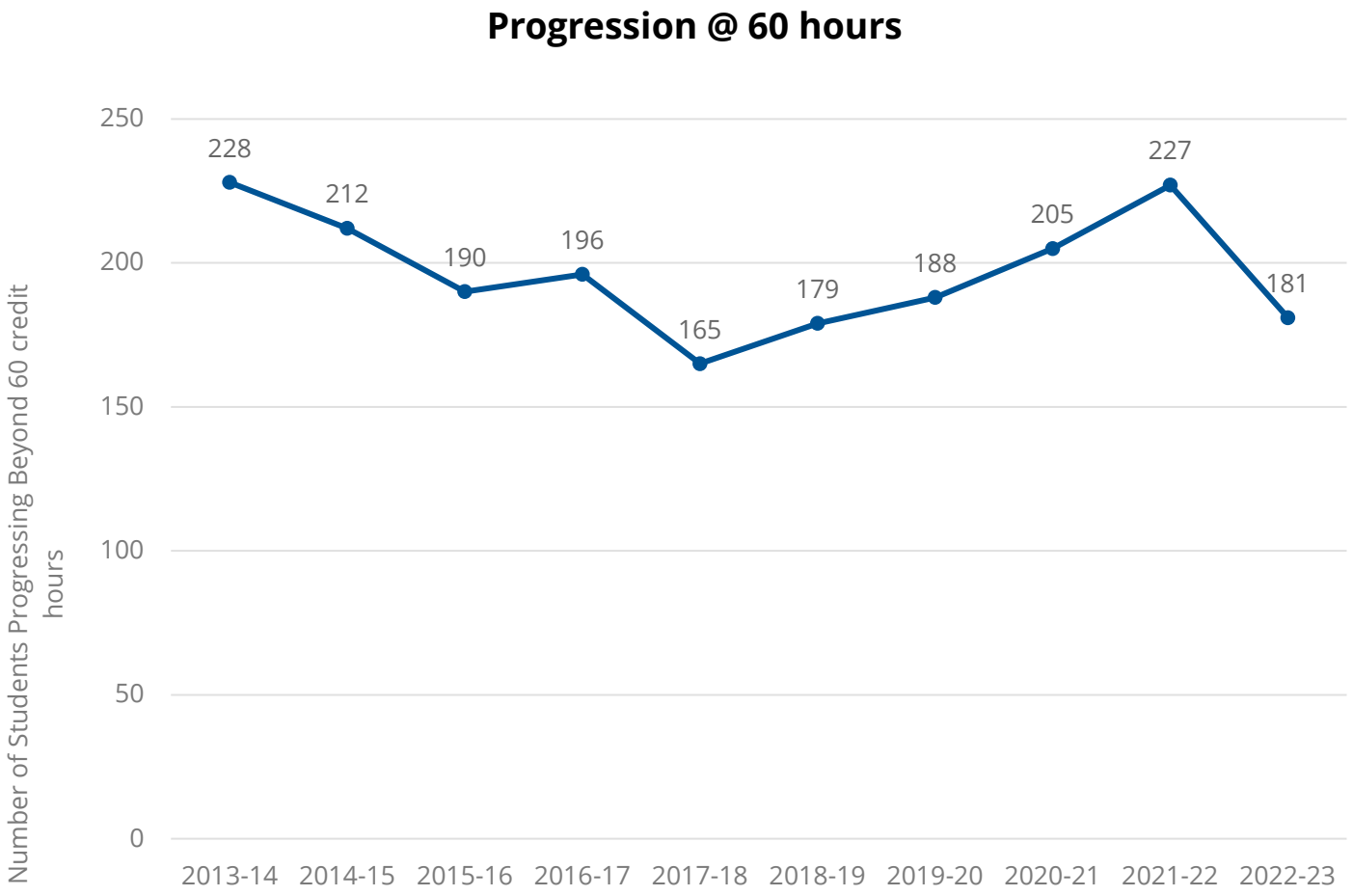
12% KSU

20% KY Comps[1]

number of undergraduate students @ 30 hours from 2013-14 to 2022-23

Notes: 1) KY Comps refers to all six Kentucky public comprehensive universities: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University. Source: Funding Model Outcomes provided by CPE.

Current State Performance on the Comprehensive Funding Model

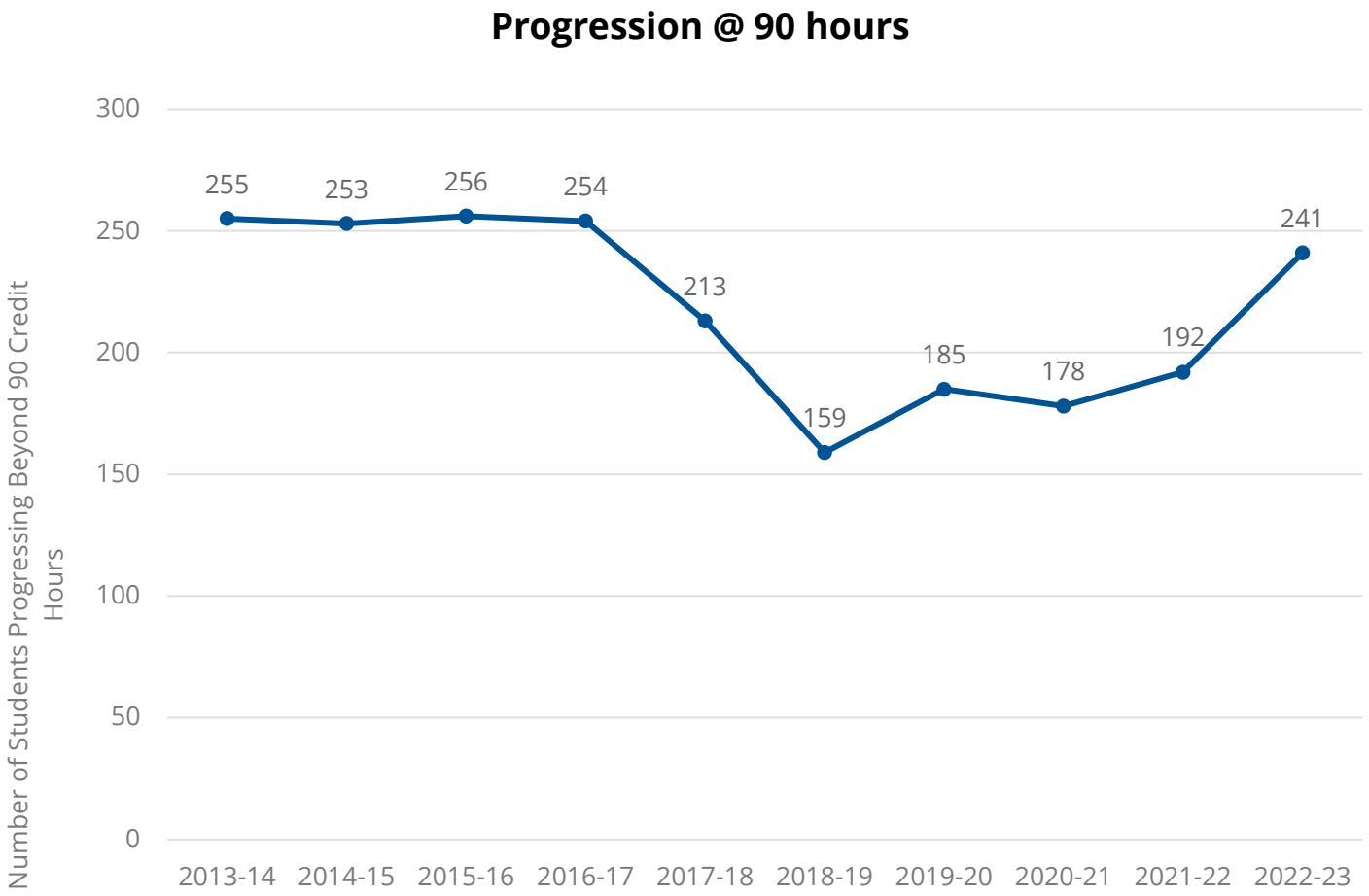


21% KSU

15% KY Comps

number of undergraduate students @ 60 hours produced from 2013-14 to 2022-23

Current State Performance on the Comprehensive Funding Model

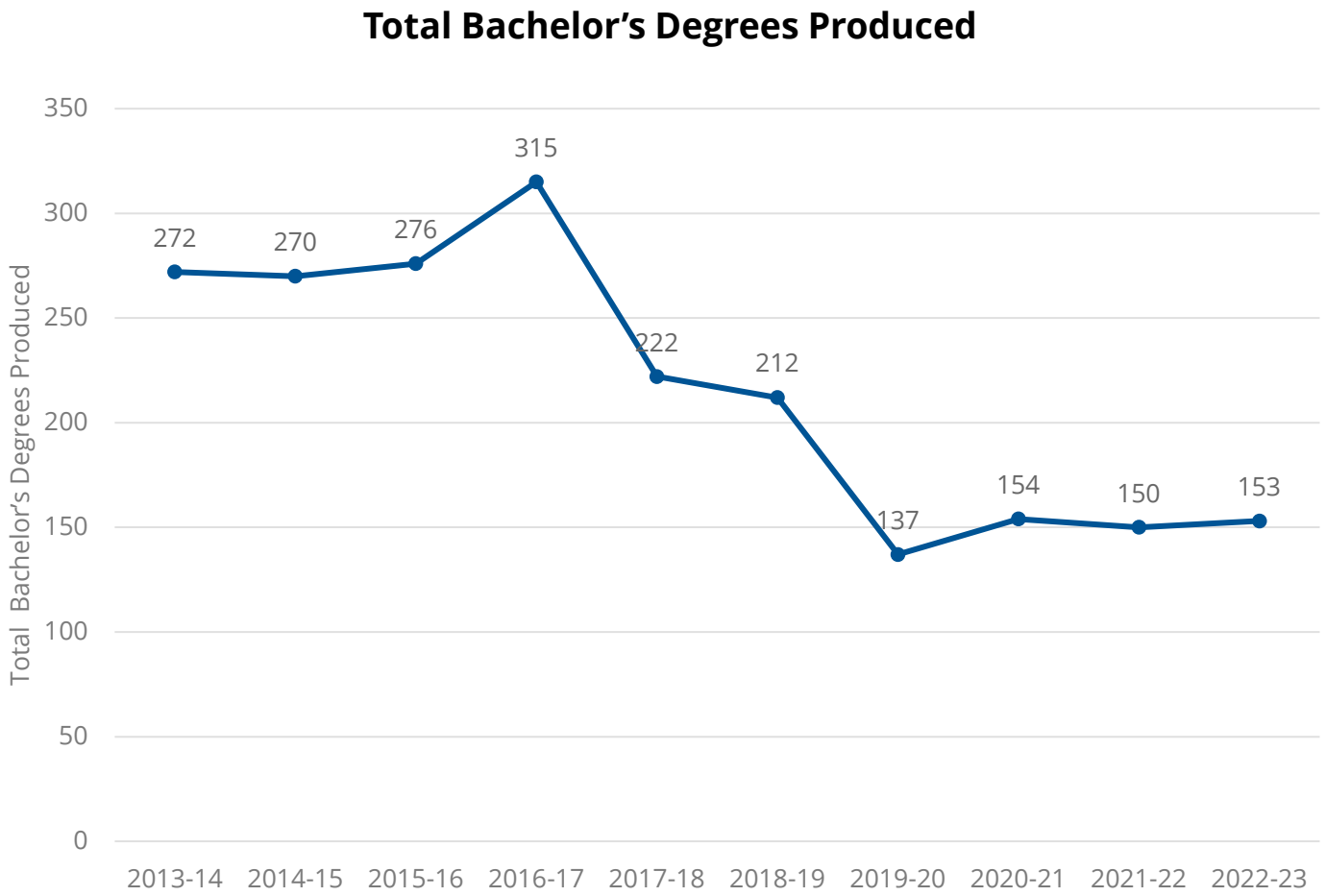


5% KSU

11% KY Comps

number of undergraduate students @ 90 hours from 2013-14 to 2022-23

Current State Performance on the Comprehensive Funding Model



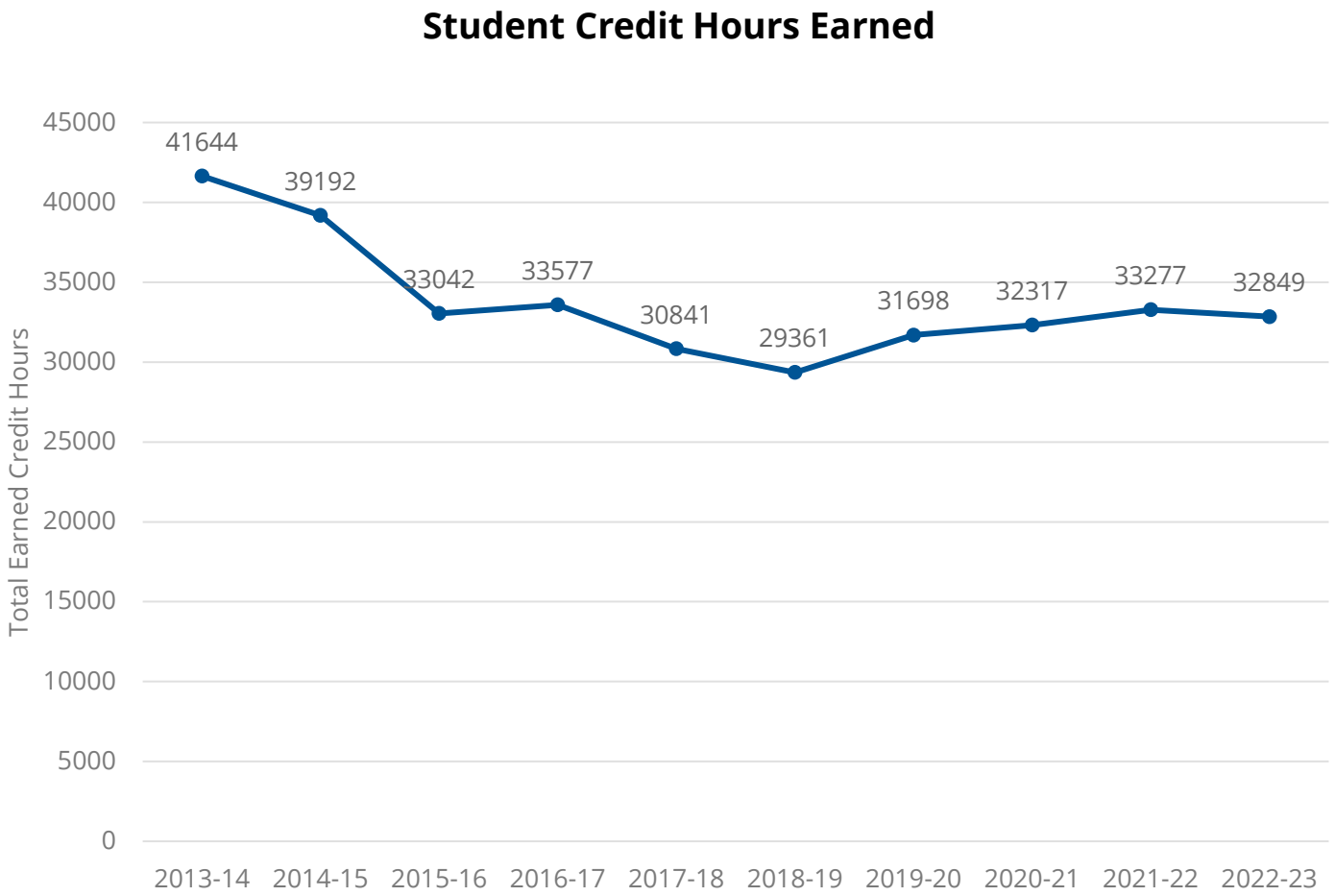
44% KSU

8% KY Comps[1]

number of Total Bachelor's produced from 2013-14 to 2022-23

Note: 1) KY Comps refers to all six Kentucky public comprehensive universities: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University. Source: Funding Model Outcomes provided by CPE.

Current State Performance on the Comprehensive Funding Model

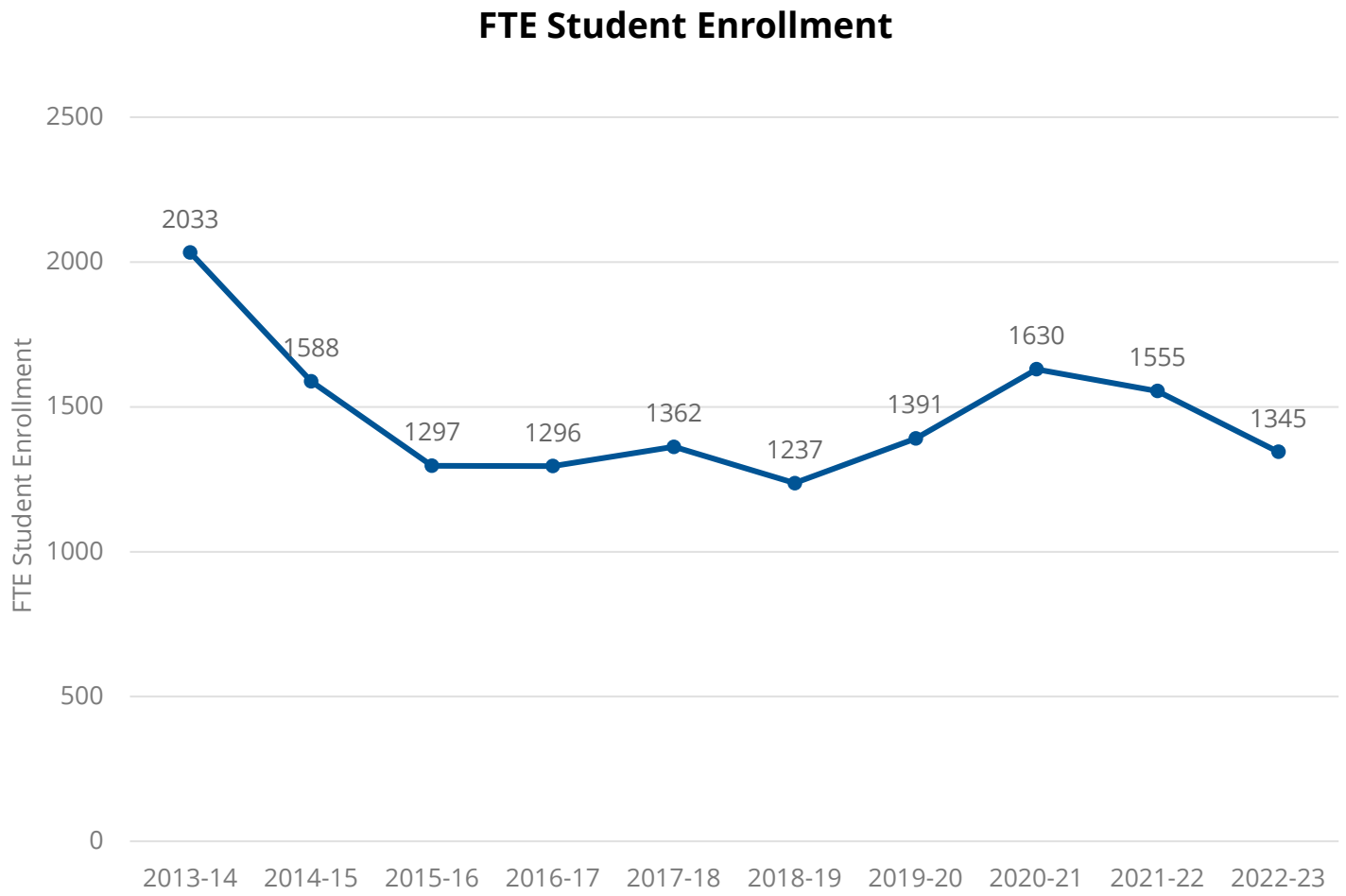


21% KSU

16% KY Comps

number of Student Credit Hours earned from 2013-14 to 2022-23

Current State Performance on the Comprehensive Funding Model



34% KSU

21% KY Comps

number of FTE Student Enrollment from 2013-14 to 2022-23

Financial Model Driving Assumptions | Other Expenses (Detailed)

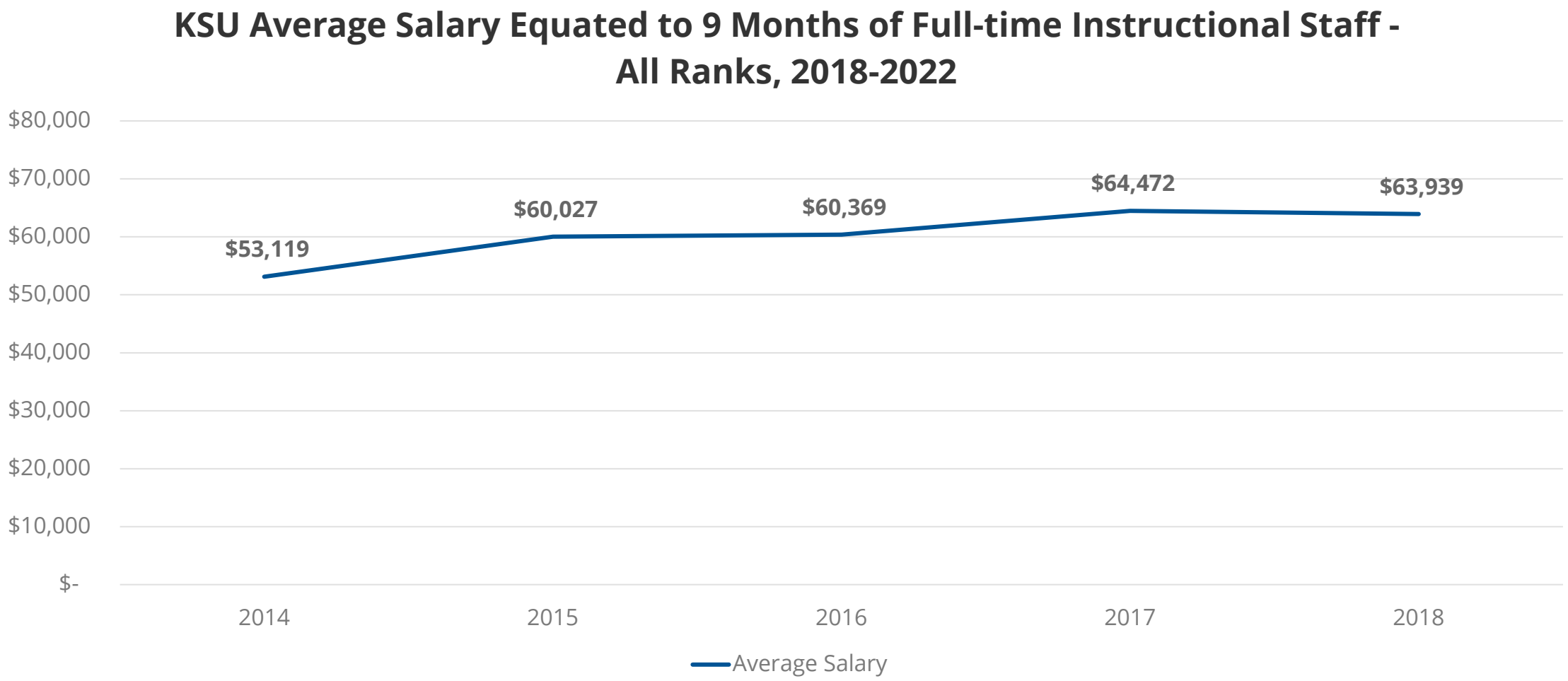
KSU stakeholder discussions, proposal and related materials, and peer / market research inform the drivers behind the financial model for the PhD in Integrated Agroecology.

Line Item	Forecast Approach	Moderate Driver	Conservative Driver
Program Development and Curriculum Design	KSU Proposal and Related Materials, National Trends	KSU supplied rate for first year, which is modeled in Year 0. KSU indicated intention to conduct program review/assessment every five years, so model assumes the cost will be incurred again in Year 4.	Same assumptions as moderate model.
Student Support	KSU Proposal and Related Materials, National Trends	KSU supplied rate of $100,000 to be spent on health insurance and other support (e.g., travel to professional conferences, training to learn new instruments or research and software skills). Model assumes that this base rate will remain constant despite fluctuations in enrollment year over year.	Same assumptions as moderate model.
Marketing	KSU Proposal and Related Materials, National Trends	Incorporates annual rates indicated by KSU.	Same assumptions as moderate model.
Facilities	KSU Proposal and Related Materials, National Trends	Assume that facilities expenses will be $0. KSU indicated that they have an infrastructure improvement plan already in place for several projects that will benefit the PhD in Integrated Agroecology program but will proceed regardless of whether the program is launched (e.g., Soil Lab, Graduate Housing)	Same assumptions as moderate model.
Other Operating Expenses	KSU Proposal and Related Materials, National Trends	Other Operating Expenses: Initial rate of $30,000 supplied by KSU ("Miscellaneous Expenses" e.g., software, computers, instruments, safety and hazard management, etc.). However, when building the model, we have included an additional $5,000 per year to cover "other/miscellaneous" expenses to account for ongoing program expenses such as office equipment and services, library materials and subscriptions).	Same assumptions as moderate model.

Sources:

Historical Faculty Salary Rates

In the KSU financial projections, starting salaries for faculty and staff were supplied by KSU, but forecasted annual increases for the moderate scenario are assumed to be 4.7% annually[1], based on five-year trend analysis of KSU's instructional faculty and staff expenses.



Notes: Conservative projections assume annual personnel increases 1 percentage point higher (5.7%). Sources: IPEDS Data Center.

Student Enrollment in Feeder Programs

KSU's total student enrollment in expected feeder programs for a PhD in Integrated Agroecology and Sustainable Agriculture.

Program	2019	2020	2021	2022	2023
MS in Environmental Studies	19	18	18	13	28
MS in Aquaculture	12	14	9	17	18
BS in Agriculture, Food and Environment	31	64	59	54	85

Source: Cursory Enrollment by Program at KSU, provided by CPE.

Survey on Interest in Proposed PhD Program

Results of June 2024 internal survey sent to KSU graduate students that asked, "Would you be interested in the PhD in Agroecology and Sustainable Agriculture blended with Data Science to be launched in Fall 2025?".

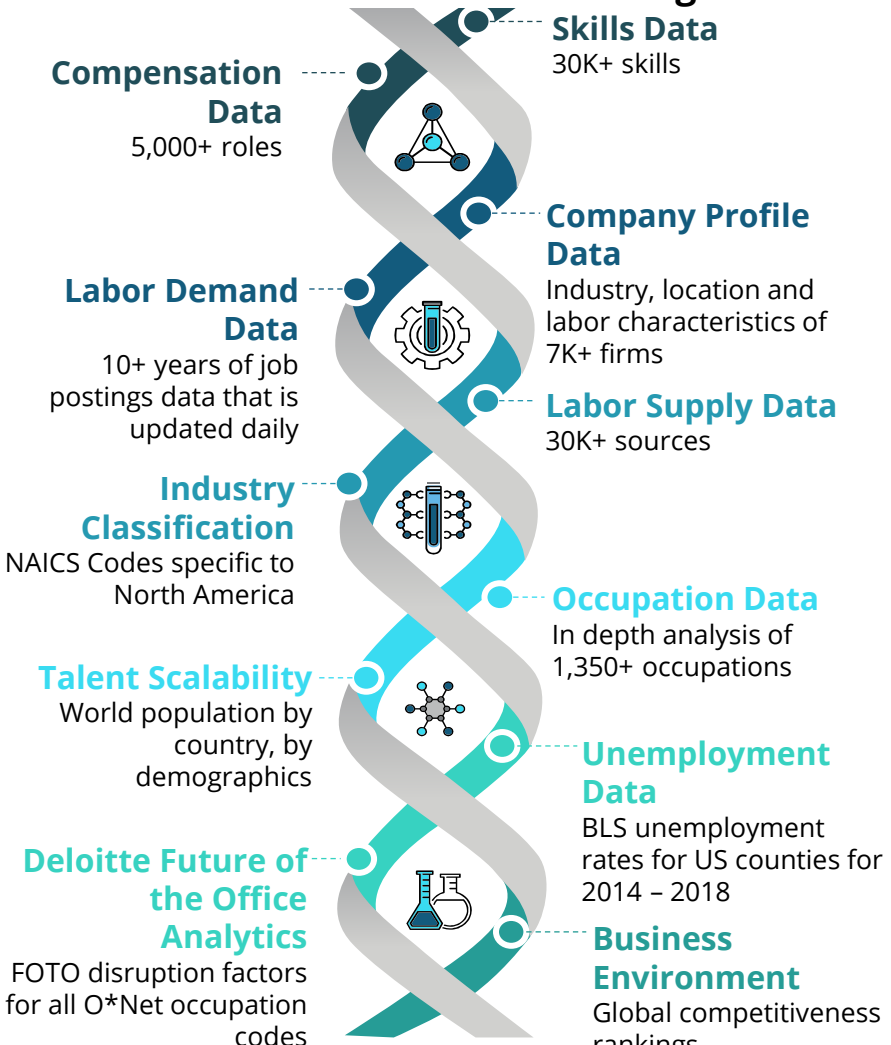
Survey Response:	**Yes**	**No**	**Undecided**	**Total**
# of responses	24	1	3	28

Source: "Results of the Market research done internally seeking interests of the current graduate students in the proposed doctoral program" provided by KSU.

Deloitte Labor Market Intelligence™ Data

Deloitte Labor Market Intelligence™ is a curated and objective workforce insights that synthesize real-time global labor market intelligence data from over 30,000 unique sources.

What is Labor Market Intelligence?



Key insight areas

Labor market competitiveness
How competitive are we in areas such as turnover, wage inflation, and hiring?

Recruitment and retention strategy
From which companies, colleges, and/or locations should we recruit talent for high-priority skills/roles?

Skills
Which tools, technologies, and skill sets are my industry peers and competitors adopting?

Labor market diversity
Is our workforce representative of the demographics of talent in our market?

Labor Market Insights powered by market data from 21 billion records across 30,000+ sources

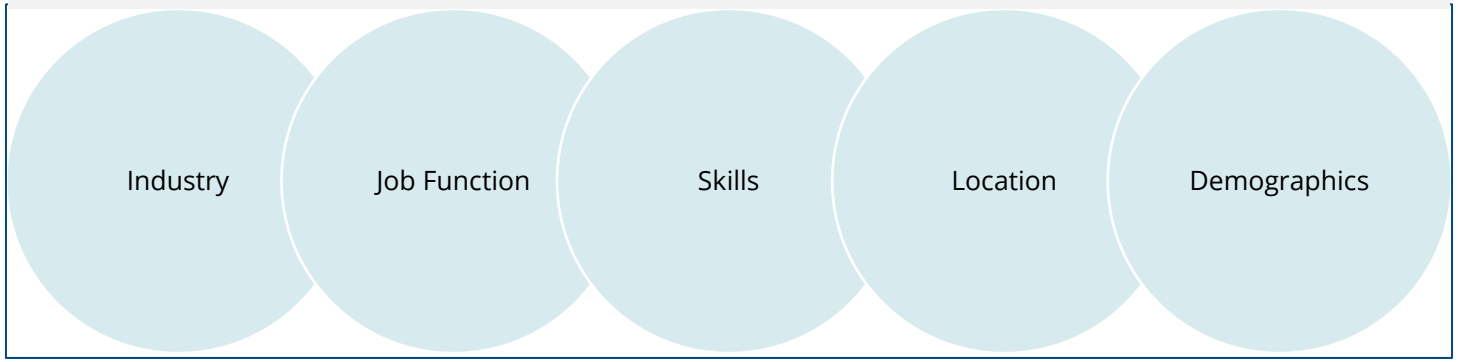
Combines data from public sources and multiple private vendors to provide a one-stop shop for labor market insights

Access is available on an as-needed basis, meaning the scope of data and costs of access scale according to the need

Supported by Deloitte's team of Human Capital experts – we know the data inside and out from the perspective of an HR practitioner

How granular are the insights?

Analyses can be tailored to fit each unique need and can be filtered/segmented by any number of dimensions, including:



Deloitte Labor Market Intelligence™ Data

Below is a listing and details of the primary sources that underpins Deloitte's Labor Market Intelligence services

Data Type	Data Topic(s)	Source Methodology	Refresh Schedule
Labor Demand	Job postings by company, location, job title, including full job description	Extract full job descriptions from over 55,000 company websites, aggregated daily	Daily
Labor Supply	Employee Profiles, Attrition, Promotion rates, career pathways, skills supply	Analyzes 330 million+ full resumes from over 2,000 unique sources, including social media websites, job boards, and job posting sites	Monthly
Compensation	Compensation of employees and compensation listed in job postings by company, location, and title	Job postings, employee review sites, compensation surveys	Monthly
Government Sources	Labor Supply, Demand, Compensation, Demographics	Government sources, internal customer sources, job posting sites, social media, online profiles and resumes	Quarterly
Skills Library	Skill clusters, titles, and definitions for over 30,000 unique skills	Extracted from an open-source skills library, monitored and modified by Deloitte for customer use	Monthly

Proposed PhD Program Implementation Timeline

After incorporating time for program development and launch, the PhD in Integrated Agroecology and Sustainable Agriculture, if approved, would likely see its first students matriculate in Fall 2026 (FY2027) with the first cohort set to graduate in Spring 2030 (FY2030).

CURRENT YEAR — FY 2025

- KSU finalizes program curriculum, projected financials, and other proposal requirements
- General Assembly passes statutory changes to permit a doctoral program in Integrated Agroecology and Sustainable Agriculture at KSU

YEAR 0 — FY 2026

- KSU submits proposal and receives official program approval from CPE
- KSU hires necessary administrative staff, appoints program director
- KSU engages in marketing and student recruitment
- Students in inaugural cohort apply and are admitted for following fall

YEAR 1 — FY 2027

- First student cohort matriculates in Fall 2026 (12-15 students)

YEAR 2 — FY 2028

- Second student cohort matriculates in Fall 2027 (4-5 students)
- KSU begins recruitment and hiring for two faculty for Fall 2028

YEAR 3 — FY 2029

- No students expected to matriculate in Fall 2028
- Two new faculty hires start in Fall 2028
- KSU begins recruitment and hiring for two faculty for Fall 2029

YEAR 4 — FY 2030

- No students expected to matriculate in Fall 2029
- Two new faculty hires start in Fall 2029
- First degrees conferred (7-10 students from Fall 2026 enrollment cohort)

Proposed timeline above was developed using key activities and dates outlined by KSU but includes adjustments as determined appropriate for timeline feasibility. As such, the dates highlighted here may not align with those proposed by KSU. Additionally, this timeline is our best assessment based on available information and may change as a result of unforeseen circumstances and/or program assumption adjustments.

Appendix | Additional Content

Additional External Stakeholders

The project team hosted virtual listening sessions with other leaders in Kentucky.

Stakeholder Group	Meeting Participants
Kentucky Community & Technical College System (KCTCS)	Dr. Ryan Quarles, President
Kentucky Office of the Governor	La Tasha Buckner, Chief of Staff John Hicks, Executive Cabinet Secretary Coulter Minix, Deputy Chief of Staff
Morehead State University	Dr. Jay Morgan, President
University of Kentucky	Dr. Eli Capilouto, President

APPENDIX | ADDITIONAL CONTENT

Historical Inflation Rates

Annual operating expense increases in the institutional financial projections were based on the average annual inflation rates based on the Consumer Price Index for All Urban Consumers from 2013 through 2023. Conservative scenarios used the average inflation rate from 2019-2023 (4.0%), while moderate scenarios used the average inflation rate from 2013-2023 (2.7%).

Consumer Price Index for All Urban Consumers, U.S. City Average, All Items, 2013-2023

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2013	230.28	232.17	232.77	232.53	232.95	233.50	233.60	233.88	234.15	233.55	233.07	233.05	232.96
2014	233.92	234.78	236.29	237.07	237.90	238.34	238.25	237.85	238.03	237.43	236.15	234.81	236.74
2015	233.71	234.72	236.12	236.60	237.81	238.64	238.65	238.32	237.95	237.84	237.34	236.53	237.02
2016	236.92	237.11	238.13	239.26	240.23	241.02	240.63	240.85	241.43	241.73	241.35	241.43	240.01
2017	242.84	243.60	243.80	244.52	244.73	244.96	244.79	245.52	246.82	246.66	246.67	246.52	245.12
2018	247.87	248.99	249.55	250.55	251.59	251.99	252.01	252.15	252.44	252.89	252.04	251.23	251.11
2019	251.71	252.78	254.20	255.55	256.09	256.14	256.57	256.56	256.76	257.35	257.21	256.97	255.66
2020	257.97	258.68	258.12	256.39	256.39	257.80	259.10	259.92	260.28	260.39	260.23	260.47	258.81
2021	261.58	263.01	264.88	267.05	269.20	271.70	273.00	273.57	274.31	276.59	277.95	278.80	270.97
2022	281.15	283.72	287.50	289.11	292.30	296.31	296.28	296.17	296.81	298.01	297.71	296.80	292.66
2023	299.17	300.84	301.84	303.36	304.13	305.11	305.69	307.03	307.79	307.67	307.05	306.75	304.70

Sources: U.S. Bureau of Labor Statistics Consumer Price Index Databases.

SACSCOC New Program Approval Prospectus Elements

Proposals for new research doctorates would require approval by SACSCOC, including submission of a prospectus for approval by the Executive Council of the SACSCOC Board of Trustees.

New Program Approval Prospectus Elements

Institutions must provide the following Common Content[1]:

1. Common Content A – Background and Context, relative to the proposed change.
2. Common Content B – Faculty Qualifications, relative to the proposed change.
3. Common Content C – Resource, relative to the proposed change.
4. Common Content D – Institutional Evaluation and Assessment Processes, relative to the proposed change.

Additionally, they must also provide the following specific items:

1. Curriculum for the program.
2. Projected schedule of course offerings for the program
3. Program-specific goals (objectives) and specific student learning outcomes for the program
4. Description of how the student learning outcomes for the program will be assessed
5. Course descriptions for all courses in the proposed program
6. Description of admissions and graduation requirements for the program
7. Planned method(s) of delivery, as defined in policy, of the program.
8. Planned location(s) at which the program will be delivered, i.e., on-campus and/or at specific off-campus instructional site(s)
9. Demonstration of compliance with Standard 10.7 (policies for awarding credit) of the Principles of Accreditation.
10. Description of administrative oversight to ensure the quality of the program.
11. For a program offered in compressed time frames: Description of the methodology for determining that levels of knowledge and competencies comparable to those required in the traditional formats have been achieved.

Notes: Detailed specifications for Common Content A-D are outlined in SACSCOC Substantive Change Policy and Procedures, Appendix A. Sources: SACSCOC Substantive Change Policy and Procedures.