

# *Jobs and Degree Requirements 2030*

Donna K. Ginther

Roy A. Roberts Distinguished Professor of Economics  
Director, Institute for Policy & Social Research, University of Kansas  
Research Associate, National Bureau of Economic Research

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**KU** INSTITUTE FOR  
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# Overview

- This report considers the supply and demand of graduates from KBOR institutions.
- Evaluate the demand for occupations with degree requirements in the state.
- Compare rates of in- and out-migration in Kansas
- Compare salaries for workers with degrees in Kansas and surrounding states.
- Conclusions:
  - Kansas needs to produce 34,000 additional degrees than projected to meet demand in the next decade.
  - Kansas has relatively low net migration.
  - Kansas salaries are lower than surrounding states.

# Projecting Labor Market Demand & Degree Supply

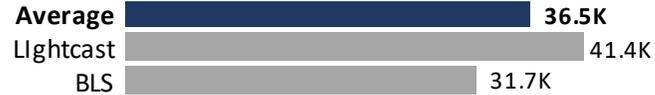
Kansas needs 34,000 more degrees to meet demand.

# Projecting Labor Market Demand

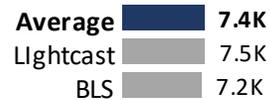
- 10-year projections of expected labor demand is based on Bureau of Labor Statistics and *Lightcast* data.
- Degree requirement is based on entry level of education for jobs from Bureau of Labor Statistics and is based on Census American Community Survey.
- Retention of graduates in Kansas with post-secondary certificates and degrees is based on data provided by KBOR.

# Ten Year Change in Jobs Requiring a Degree 2020-2030 by Required Degree

## Bachelor's degree



## Postsecondary degree



## Doctoral or professional degree



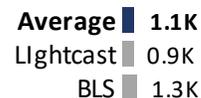
## Master's degree



## Associate's degree



## Some college, no degree

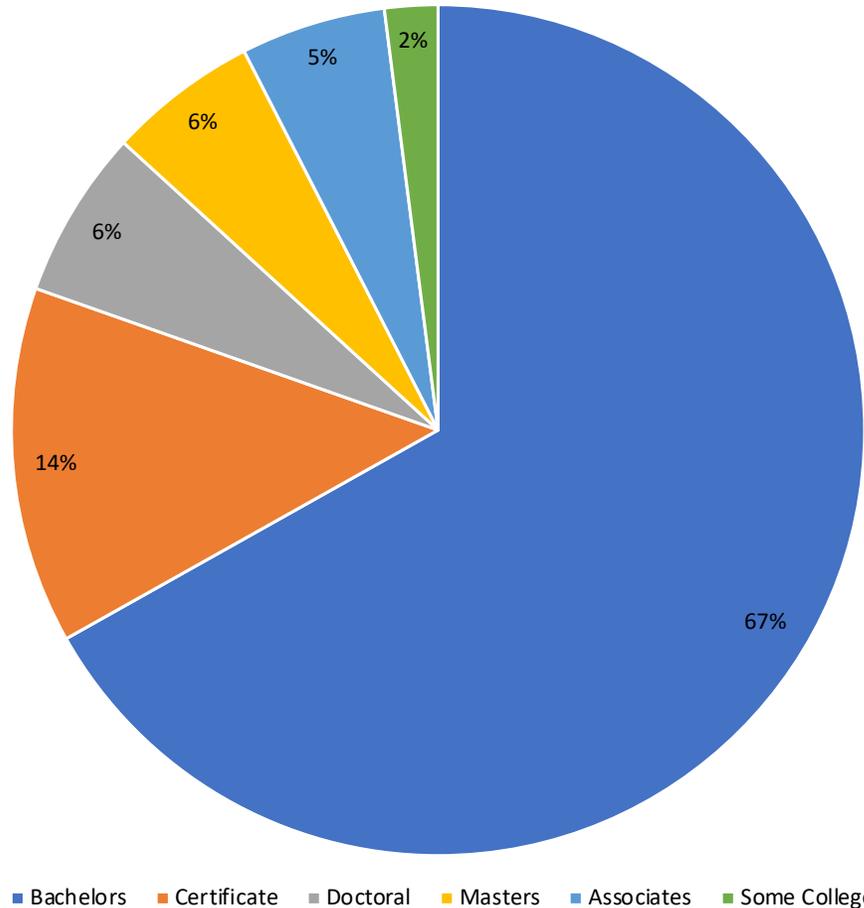


From 2020 to 2030 Kansas will add 54K jobs that require a degree:

- 36.5K will require a Bachelor's degree
- 7.4K will require a Postsecondary non-degree award
- 3.5K will require a Doctoral/professional degree
- 3.1K will require a Master's
- 3K will require an Associate's
- 1.1K will require Some college, no degree

# Ten Year Change in Jobs Requiring a Degree 2020-2030 by Required Degree

Change in Demand for Degrees in Kansas



From 2020 to 2030 Kansas will add 54K jobs that require degrees:

- 67% will require a Bachelor's degree
- 14% will require a Postsecondary non-degree award
- 6% will require a Doctoral/professional degree
- 6% will require a Master's
- 5% will require an Associate's
- 2% will require Some college, no degree

# Kansas Projections (BLS)

BLS estimates:

	Jobs in 2020	change in 10 years		Jobs in 2030
Bachelor's degree	313,454	+31,677 jobs	10.1% increase	345,131
Postsecondary non-degree award	101,127	+7,241 jobs	7.2% increase	108,368
Some college, no degree	45,977	+1,275 jobs	2.8% increase	47,252
Doctoral or professional degree	32,518	+2,123 jobs	6.5% increase	34,641
Associate's degree	26,226	+2,484 jobs	9.5% increase	28,710
Master's degree	23,867	+3,212 jobs	13.5% increase	27,079

BLS Projections indicate a 10% increase in Bachelor's degrees and a 7% increase in certificates. Demand for Masters degrees will increase almost 14%.

# Kansas Projections (*Lightcast*)

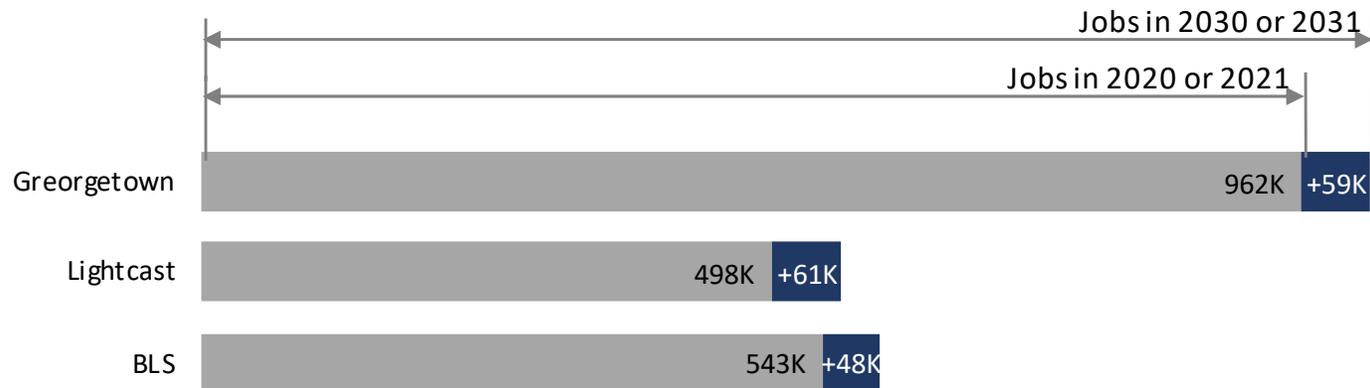
Lightcast estimates:

	Jobs in 2020	change in 10 years		Jobs in 2030
Bachelor's degree	281,444	+41,421 jobs	14.7% increase	322,864
Postsecondary non-degree award	94,353	+7,544 jobs	8% increase	101,897
Some college, no degree	42,989	+877 jobs	2% increase	43,867
Doctoral or professional degree	31,852	+4,855 jobs	15.2% increase	36,708
Associate's degree	25,594	+3,477 jobs	13.6% increase	29,072
Master's degree	22,120	+3,008 jobs	13.6% increase	25,128

*Lightcast* projections are more recent than BLS projections and use a different employment series as the basis of their projections.

*Lightcast* estimates a 15% increase in Bachelor's degrees and a 14% increase in Master's degrees.

# Georgetown Projections

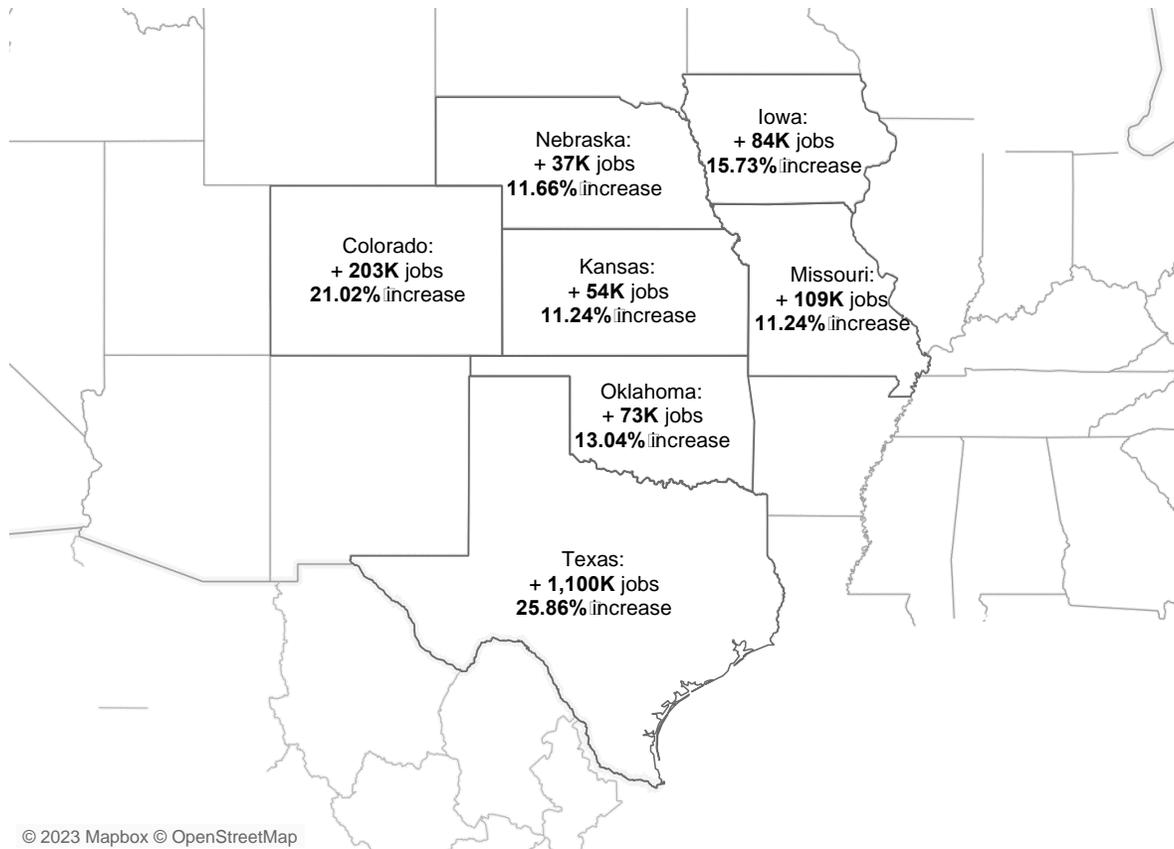


- Georgetown Center for Education and the Workforce also provides employment projections.
- However, their estimates are much higher than BLS or *Lightcast* and out of sample comparisons are not consistent with other forecasts.

# Projected New Regional Jobs Requiring a Degree

## Ten Year Change in Jobs Requiring a Degree 2020-2030 in Kansas and Surrounding States

Ten year change in jobs requiring a degree from 2020 to 2030 in Kansas and five other states:



From 2020 to 2030 Kansas will add second smallest number of jobs requiring a degree:

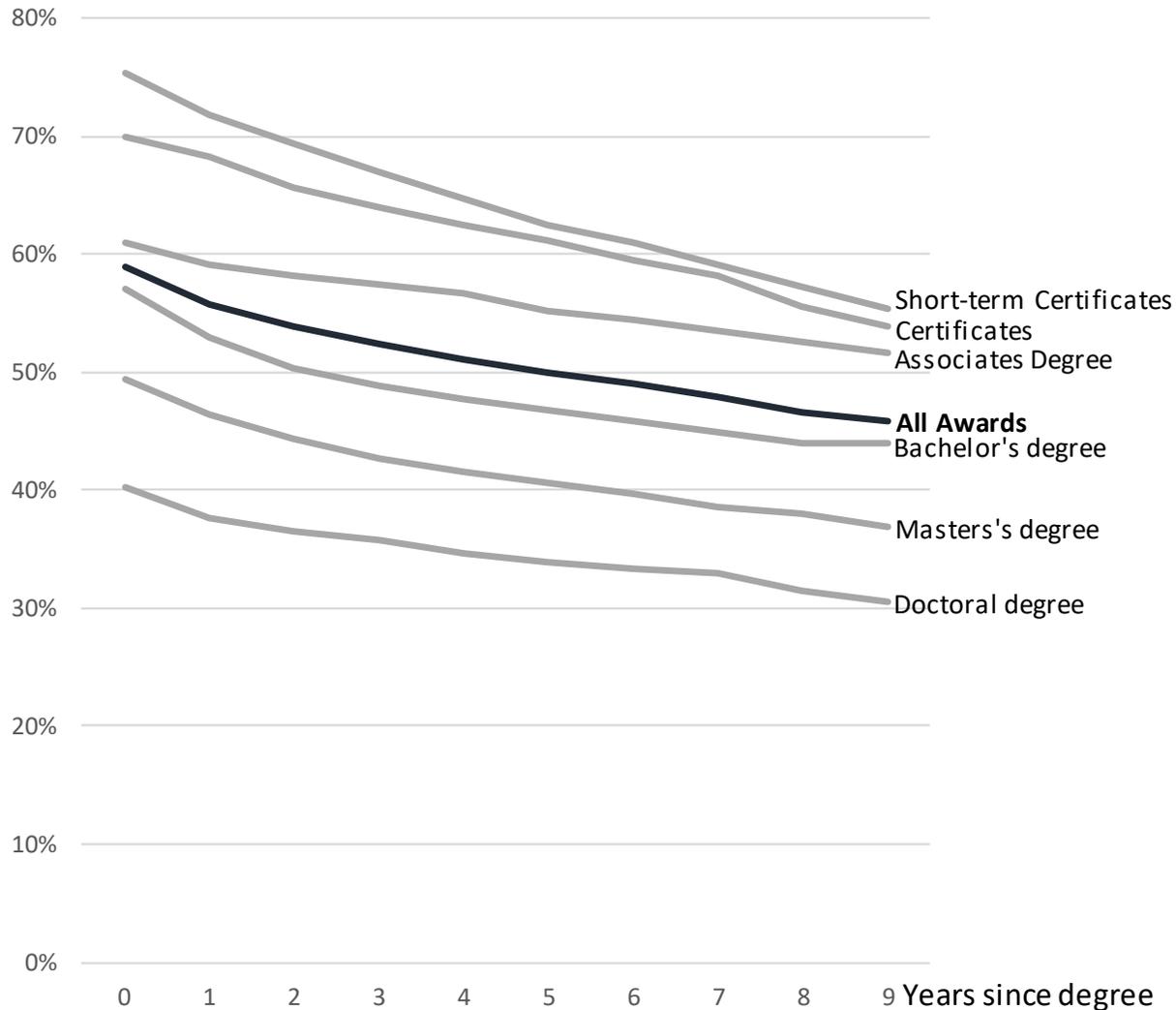
- Surrounding states will add 1.6 million.
- By far biggest gain in Texas, followed by Colorado and Missouri.

# Exits out of the Kansas labor force over 10 years

Degree	Exits
Bachelor's degree	89,463
Postsecondary non-degree award	44,632
Some college, no degree	20,899
Associate's degree	8,772
Doctoral or professional degree	8,427
Master's degree	7,680
Total	179,873

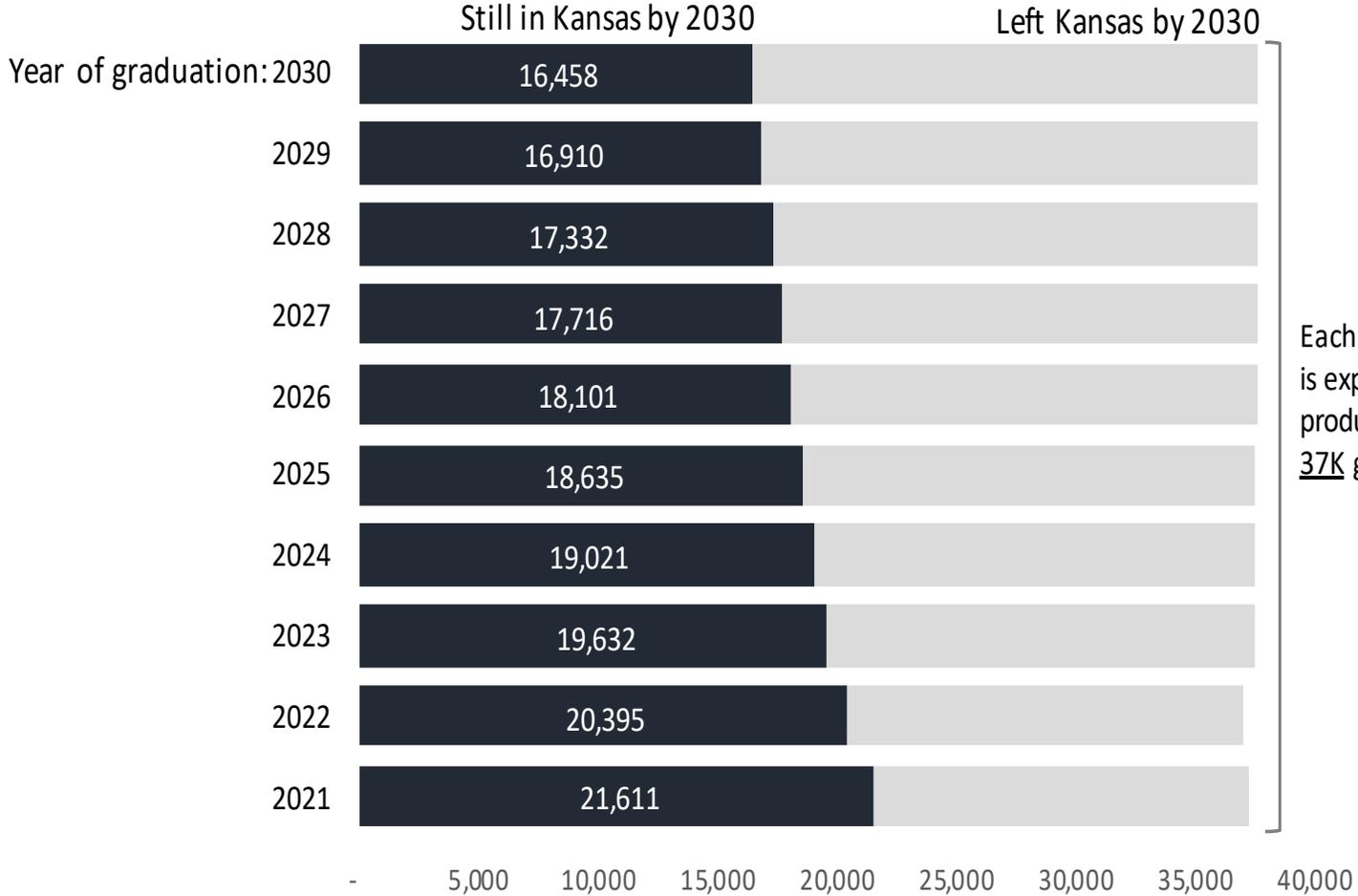
- Labor force exits are the projected number of workers exiting the labor force entirely.
- BLS projects that Kansas will have 180 thousand exits from the labor force in 2020-2030.
- It includes workers who exit the labor force to pursue additional education with the intention of returning to the labor force.

# Retention of graduates from state universities in Kansas



- Kansas retains more people with Associate degrees and Certificates than other degrees.
- For BA, MA and PhD - the higher the degree, the lower the retention rate (initial and over time).
- Kansas retains fewer than half of Bachelors' degree recipients nine years after degree.

# Number of new graduates over 10 years



Each year Kansas is expected to produce about 37K graduates

About 200,000 new graduates with post-secondary degrees will stay to work in Kansas over 10 years.

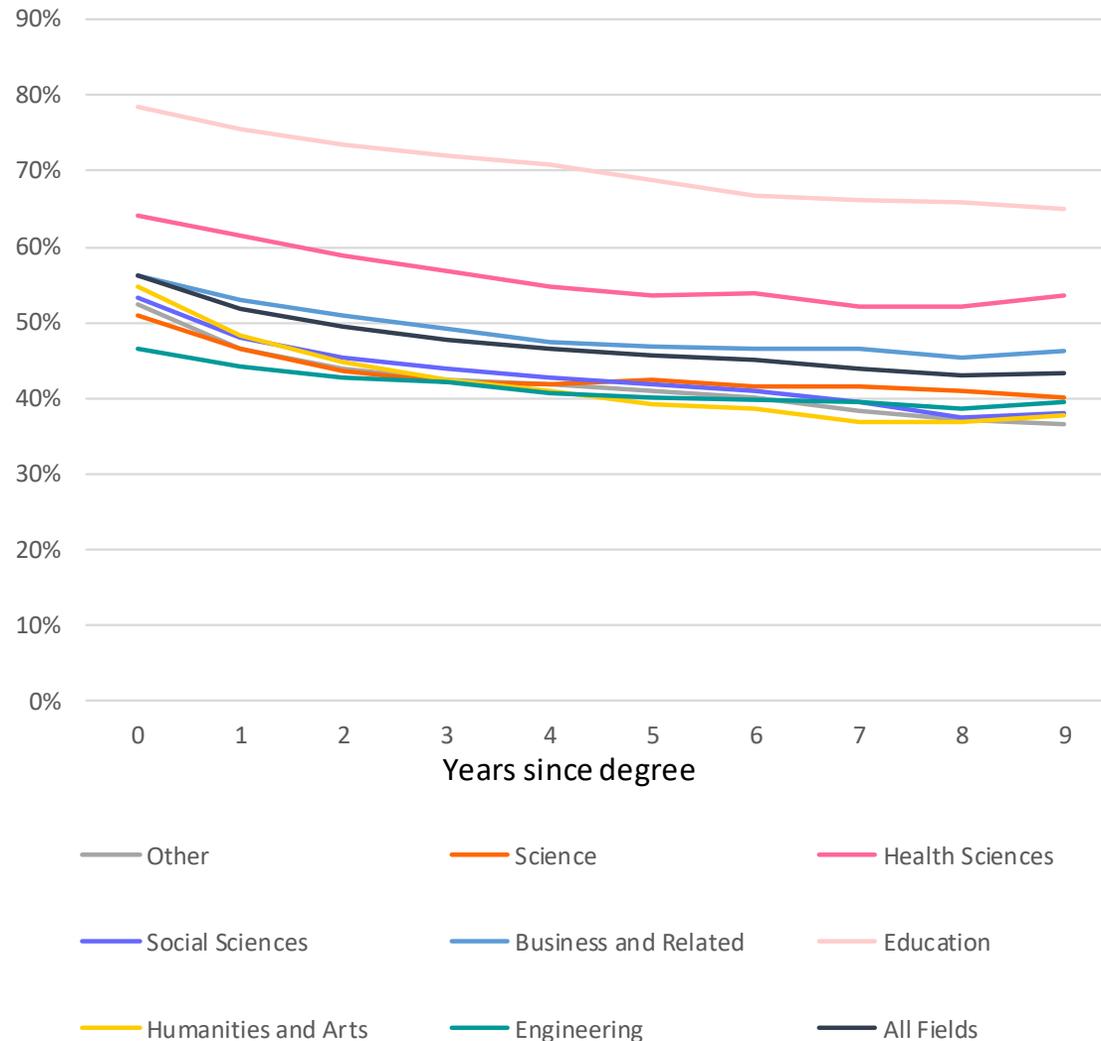
# Conclusions on Labor market demand

- Between 2020 and 2030 Kansas will add 54K jobs that require postsecondary degree.
- Another 180K jobs that require postsecondary degree will exit the labor force due to retirement or moving out of Kansas.
  - A total of 234K jobs will need to be filled with new graduates over 10 years.
- Kansas will have 200K new post-secondary Kansas graduates over 10 years.
  - This is 34K less than needed to satisfy the expected increase in jobs.

# Retention and Migration of KBOR Graduates

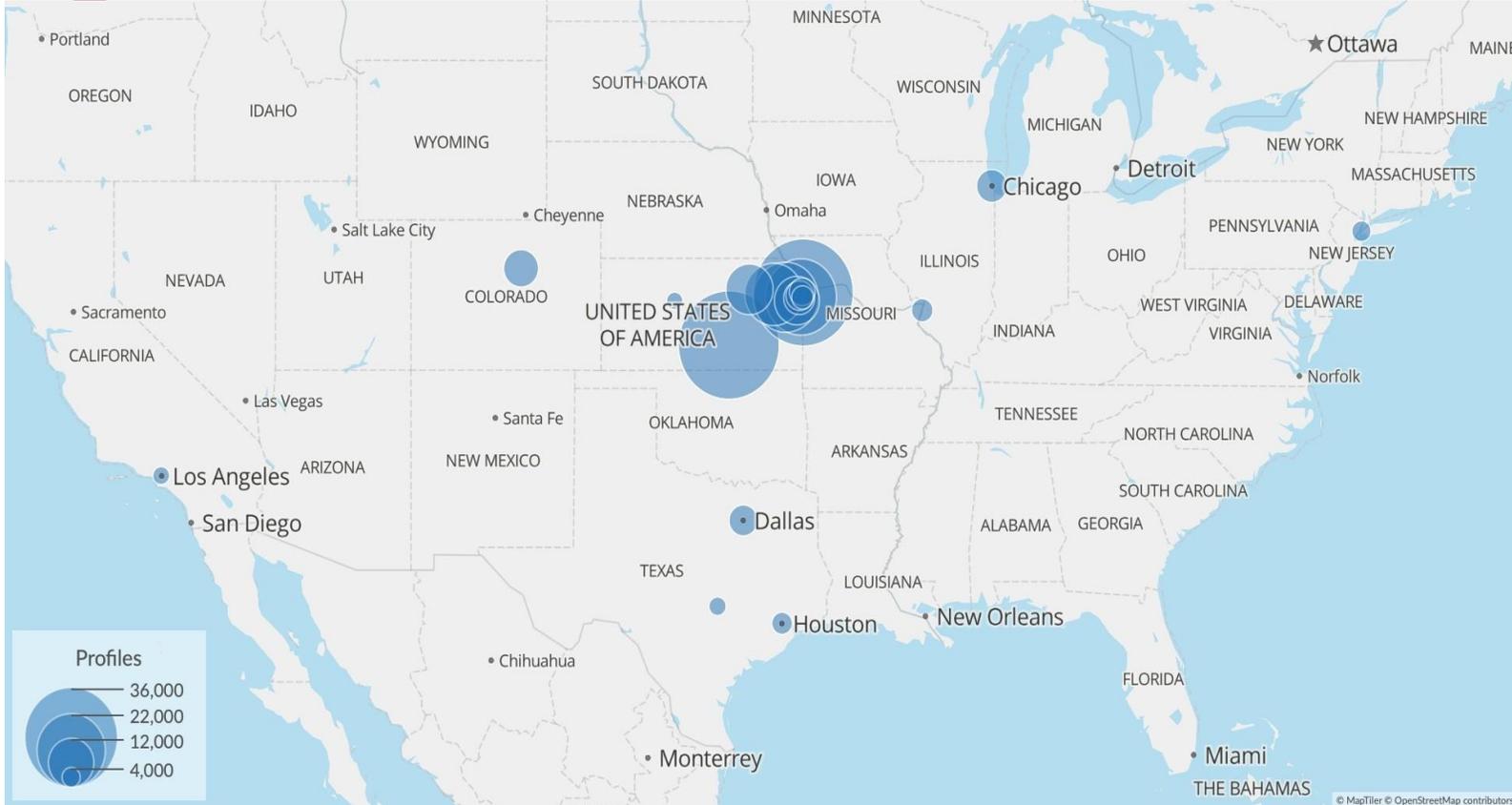
Kansas exports workers to Colorado and Texas

# Retention of graduates from state universities in Kansas



- All degrees and fields lose about 10% of people, who initially stayed in Kansas, by the 9th year since getting their degree.
- People with degrees in Education are the most likely to stay in Kansas after receiving the degree.

# Retention of graduates from state universities in Kansas



- Kansas exports students to Texas, Missouri, Colorado and Illinois.
- In general, there are higher wages in both Colorado and Texas.

# Domestic migration in Kansas

**Table 1. Kansas Domestic Migration by Age and Education for Adults Ages 20 to 55**

Annual Average 2017-2021

Age	Education	Population	In-Migrants from US States	Domestic In-Migration Annual Rate	Out-Migrants to US States	Domestic Out-Migration Annual Rate	Net Domestic Migration (In - Out)	Net in-Migration Annual Rate
20 to 25	BA and Above	49,125	6,391	13.01%	7,123	14.50%	-732	-1.49%
26 to 35	BA and Above	139,616	10,410	7.46%	10,449	7.48%	-39	-0.03%
36 to 55	BA and Above	259,444	7,462	2.88%	6,370	2.46%	1,092	0.42%
Subtotal	BA and Above	448,185	24,263	5.41%	23,942	5.34%	321	0.07%
20 to 25	Some College, No BA	116,374	7,090	6.09%	7,052	6.06%	38	0.03%
26 to 35	Some College, No BA	124,910	7,357	5.89%	5,378	4.31%	1,979	1.58%
36 to 55	Some College, No BA	218,815	5,445	2.49%	5,827	2.66%	-382	-0.17%
Subtotal	Some College, No BA	460,099	19,892	4.32%	18,257	3.97%	1,635	0.36%
20 to 25	High School or Less	88,579	5,248	5.92%	4,271	4.82%	977	1.10%
26 to 35	High School or Less	111,061	5,322	4.79%	5,234	4.71%	88	0.08%
36 to 55	High School or Less	224,155	4,585	2.05%	5,208	2.32%	-623	-0.28%
Subtotal	High School or Less	423,795	15,155	3.58%	14,713	3.47%	442	0.10%
All ages	All education	1,332,079	59,310	4.45%	56,912	4.27%	2,398	0.18%

- In- and out-migration for Kansas falls as age rises.
- Out-migration increases as education rises.
- Out-migration rates are highest for adults ages 20-35 with a bachelor's degree or higher.
- Net domestic migration is very small in Kansas during the time span analyzed.
- Kansas loses highly educated young people to other states, but also pulls in highly educated people from other states.
- This suggests opportunities for Kansas to "recruit" its own young people with bachelor's degrees and with some college.

# Domestic migration for Kansas and comparison states

**Table 2. Domestic Migration for Kansas and Comparison States for People with Bachelor's Degree or Higher, Ages 20-35**

Annual Average 2017-2021

State	Population, BA+, 20-35		Out-Migration	In-Migration	Net In-Migration
Kansas	188,741	Number	17,572	16,801	-771
		Rate	9.31%	8.90%	-0.41%
Texas	1,804,300	Number	77,988	105,028	27,040
		Rate	4.32%	5.82%	1.50%
Colorado	512,969	Number	39,092	56,470	17,378
		Rate	7.62%	11.01%	3.39%
California	2,923,474	Number	122,490	131,475	8,985
		Rate	4.19%	4.50%	0.31%
Missouri	377,399	Number	31,467	26,738	-4,729
		Rate	8.34%	7.08%	-1.25%
Oklahoma	187,949	Number	15,263	11,839	-3,424
		Rate	8.12%	6.30%	-1.82%
Nebraska	136,897	Number	10,380	8,804	-1,576
		Rate	7.58%	6.43%	-1.15%
Iowa	192,848	Number	16,551	11,062	-5,489
		Rate	8.58%	5.74%	-2.85%
Minnesota	439,766	Number	23,584	24,749	1,165
		Rate	5.36%	5.63%	0.26%
Wisconsin	370,240	Number	25,846	20,068	-5,778
		Rate	6.98%	5.42%	-1.56%
Arkansas	138,450	Number	9,270	7,207	-2,063
		Rate	6.70%	5.21%	-1.49%

Comparison states: large states to which Kansas “exports” young adults with degrees; nearby states; a few additional states in Midwest.

- Overall, Kansas out- and in-migration are nearly the same for this demographic group.
- Of the states analyzed, Kansas exports the largest share of its young, highly educated adults. But Kansas also imports workers in the targeted age group. This is in part due to young people moving across the Kansas-Missouri border in the KC Metro.
- Texas, Colorado have high net in-migration rates for young, highly-educated adults.

# Top destinations for out-migration from Kansas

**Table 3. Top Destinations for Kansas Out-Migrants, BA or Above, Ages 20-35**

Annual Average 2017-2021

State	Domestic Out-Migration from Kansas	Domestic In-Migration to Kansas	Net Domestic In-Migration (in minus out)
Missouri-KC Area	3,603	4,116	513
Texas	2,169	1,046	-1,123
Missouri-Non KC Area	1,318	1,291	-27
California	1,104	869	-235
Colorado	1,002	376	-626
Oklahoma	997	510	-487
Nebraska	590	759	169
New York	581	437	-144
Maryland	568	150	-418
Illinois	520	388	-132
Florida	504	339	-165
Indiana	500	382	-118
All States	17,572	16,801	-771

- By far the largest number Kansas out-migrants move to the Missouri side of the Kansas City Metro Area.
- Texas attracts over 2,000 young Kansans with Bachelor's degrees each year.
- The remainder of Missouri, California, Colorado, and Oklahoma also attract large numbers of this demographic group.
- Overall, there is a small net outflow of highly educated Kansans in the 20-35 age group.

# Top states in-migration to Kansas

**Table 4. Top States of Origin for Kansas In-Migrants, BA or Above, Ages 20-35**

Annual Average 2017-2021

State	Domestic In-Migration to Kansas	Domestic Out-Migration from Kansas	Net Domestic In-Migration (in minus out)
Missouri-KC Area	4,116	3,603	513
Missouri-Non KC Area	1,291	1,318	-27
Texas	1,046	2,169	-1,123
California	869	1,104	-235
Nebraska	759	590	169
Iowa	733	215	518
Minnesota	522	139	383
Oklahoma	510	997	-487
All States	16,801	17,572	-771
International In-Migration	2,296		

- Kansas also attracts young educated workers from other states.
- About 25% of these in-migrants come from the Missouri KC Area.
- The remainder of Missouri, Texas, California, Nebraska, and Iowa are other significant sources of in-migration.



# Salaries for KBOR Graduates in Kansas and Surrounding States

Kansas pays relatively low wages

# Salaries comparison for Kansas and nearby states

- We use data on 2022 salaries by occupation with Bachelor's degree as minimum required, from Occupation Employment and Wage Statistics, BLS.
- Salaries are adjusted for Kansas prices.
- Occupations are aggregated in a broader categories similar to CIP codes, and salaries are weighted by the number of people.

# Adjustment of salaries to the Kansas Price Level

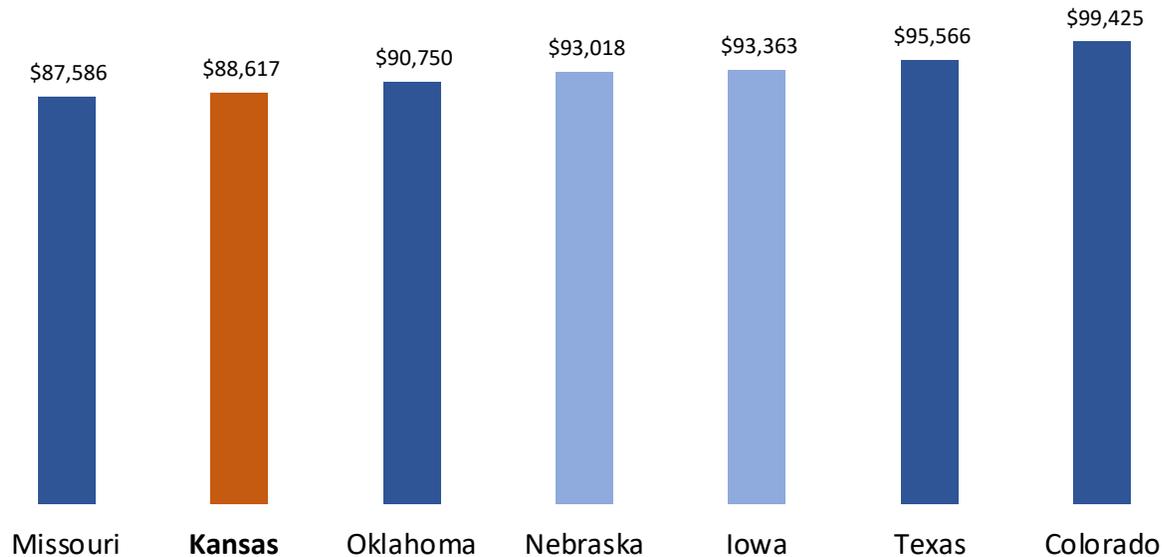
- Link to BLS methodology: [Methodology for Regional Price Parities \(RPP\)](#)
- Regional Price Parities: Average price indexes for each state so that the index is 100 for the US each year.
- If a state has an RPP of 110, it means that its prices are 10% higher than the US average.
- Disclaimer: we are using 2022 wages from BLS, but the 2022 RPP is not available, so we used 2021 RPPs to adjust wages to Kansas prices.
- As long as regional price differences do not vary significantly from year to year, it is safe to use the 2021 RPP for this analysis.
- In 2022 the average (weighted) salary of engineers was \$113,295 in Texas.
- The average price level in 2021 was 98.502 in Texas and 91.157 in Kansas. So, on average, both states are less expensive than the US, but Texas is still more expensive than Kansas.
- We adjust Texas salaries as follows:

$$TX_{adj} = 113,295 * \left( \frac{91.157}{98.502} \right) = 104,847$$

- In other words, earning \$113,295 in Texas was equivalent to earning \$104,847 in Kansas in 2022.

# 2022 Business Salaries in Kansas and nearby states

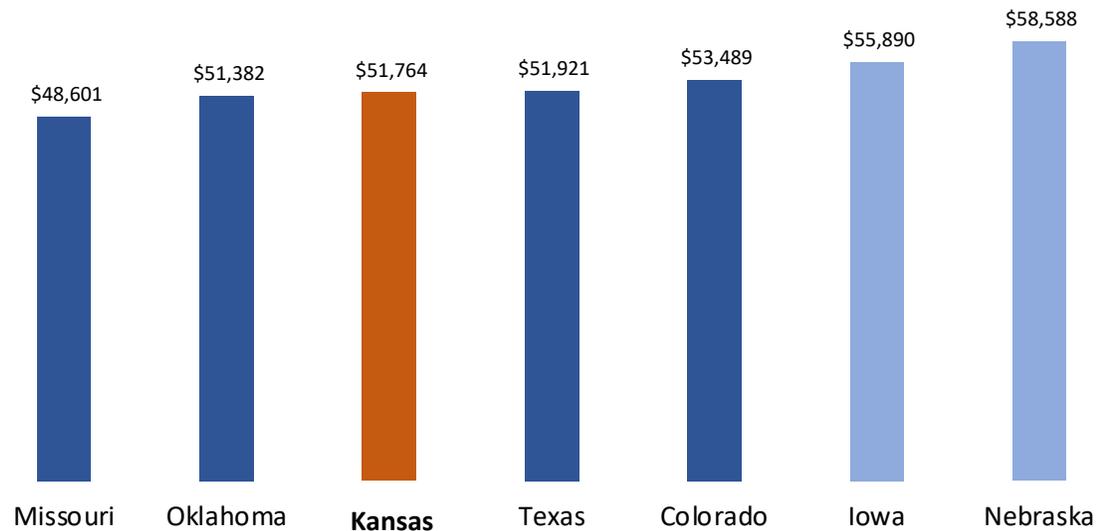
## Business and Related Occupations



- Compared to nearby states, Kansas has second lowest salaries in Business occupations.
- Salaries are lower than Oklahoma, Texas and Colorado, but higher than Missouri.
- Business workers earn over \$10,000 less in Kansas than Colorado.

# 2022 Education Salaries in Kansas and nearby states

## Education Occupations

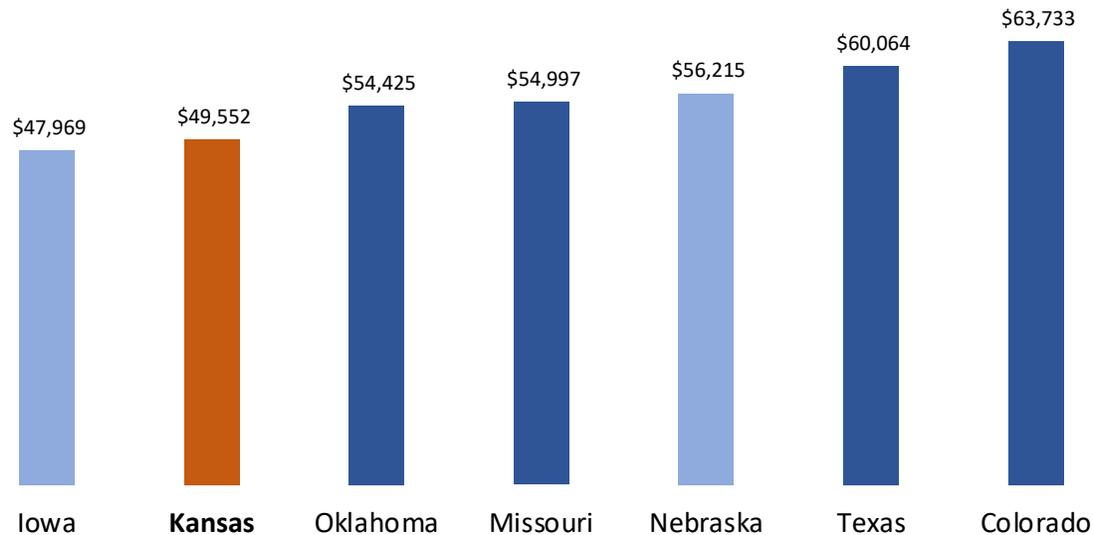


Out of nearby states, Kansas salaries in Education occupations fall somewhere in the middle.

Kansas is lower than Texas and Colorado, but higher than Missouri and Oklahoma.

# 2022 Humanities/Arts Salaries in Kansas and nearby states

Humanities and Arts Occupations

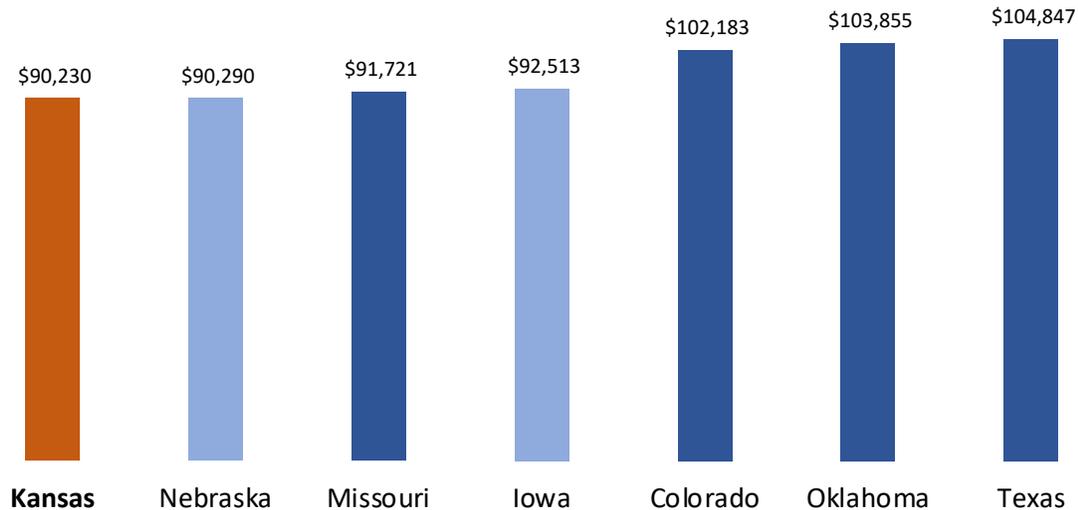


Out of nearby states, Kansas has second lowest salaries in Humanities and Arts occupations.

Kansas is lower than Texas, Colorado, Missouri and Oklahoma.

# 2022 Engineering Salaries in Kansas and nearby states

## Engineering Occupations

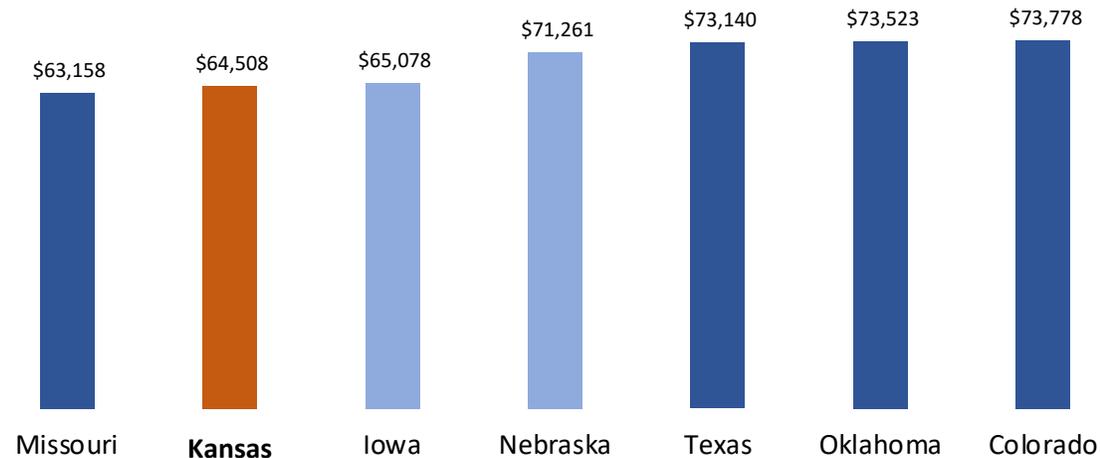


Out of nearby states, Kansas has the lowest salaries in Engineering occupations.

An engineer in Kansas earns \$15,000 less than an engineer in Texas.

# 2022 Life Science Salaries in Kansas and nearby states

Life Science Occupations



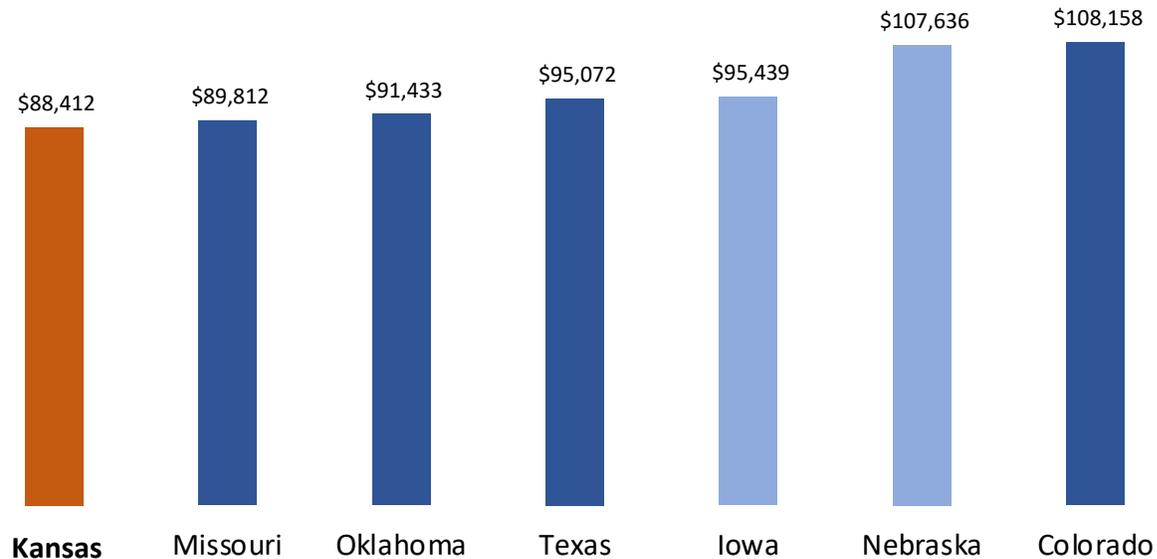
Out of nearby states, Kansas has second lowest salaries in Life Science occupations.

Kansas is lower than Texas, Colorado and Oklahoma, but higher than Missouri.

A life scientist in Kansas earns \$10,000 less than a life scientist in Texas.

# 2022 Math/Computer Science Salaries in Kansas and nearby states

## Mathematicians and Computer Scientists

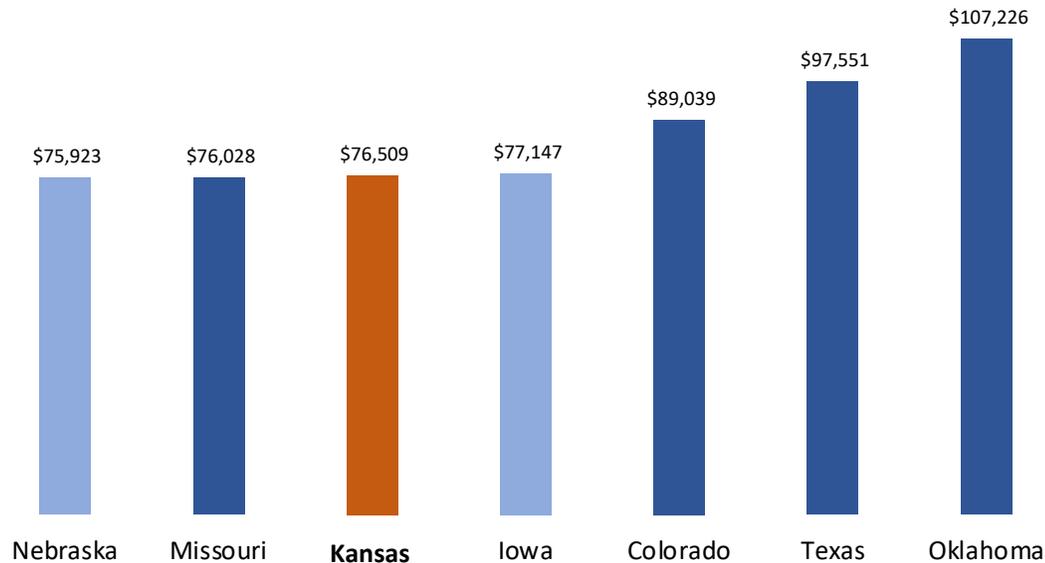


Out of nearby states, Kansas the lowest salaries in Mathematics and Computer Science occupations.

The gap is \$20,000 per year between Kansas and Colorado.

# 2022 Physical Science Salaries in Kansas and nearby states

## Physical and Earth Scientists

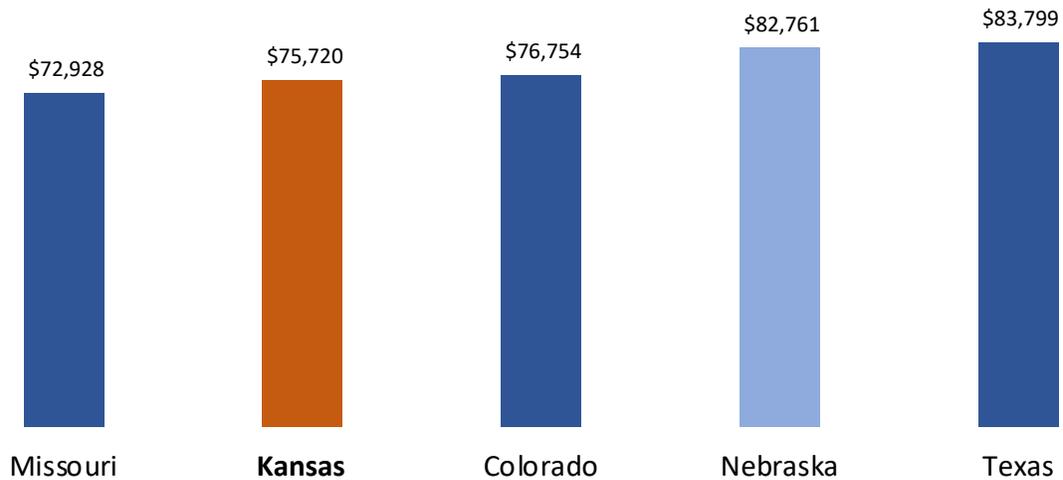


Out of nearby states, Kansas has third lowest salaries in Physical and Earth Science occupations.

Kansas salaries are \$15,000 lower than in Colorado.

# 2022 Social Science Salaries in Kansas and nearby states

## Social Scientists\*

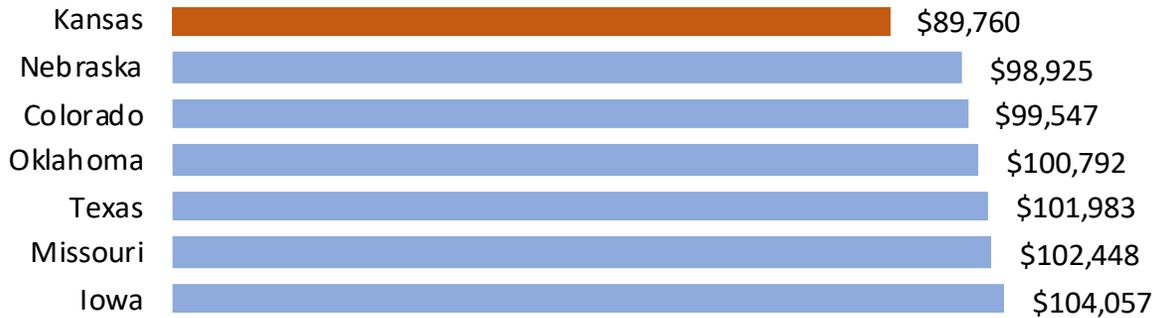


Out of nearby states, Kansas has second lowest salaries in Social Science occupations.

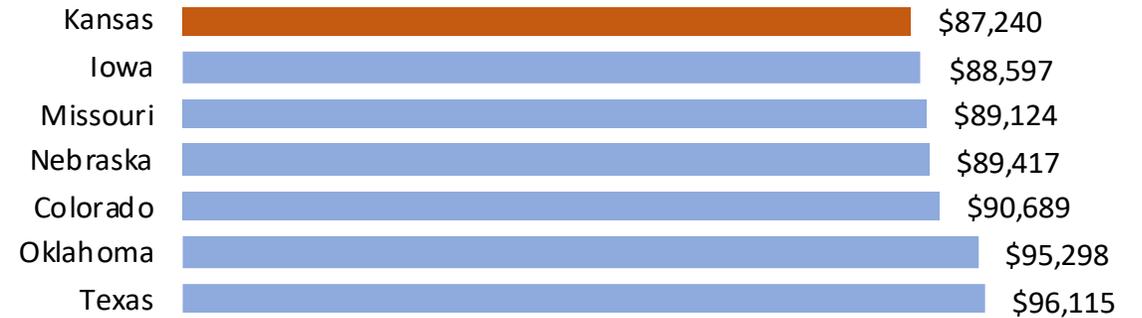
\*No Oklahoma data

# 2022 Salaries in Kansas and nearby states for Engineers

## Electrical Engineers



## Industrial Engineers



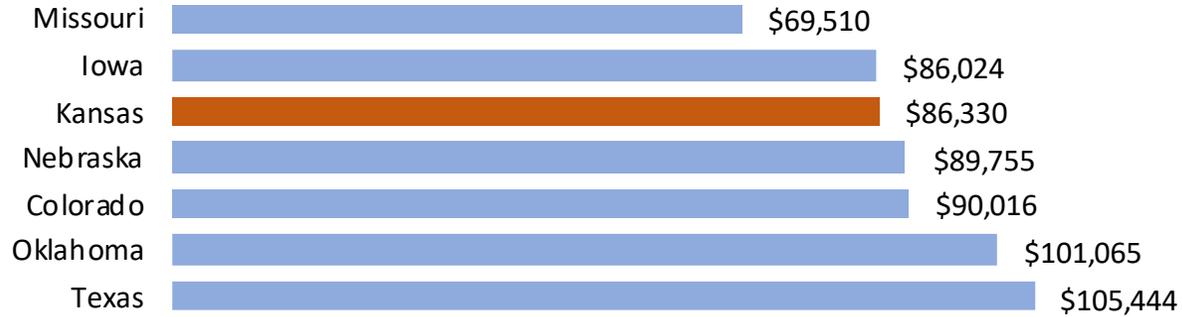
## Mechanical Engineers



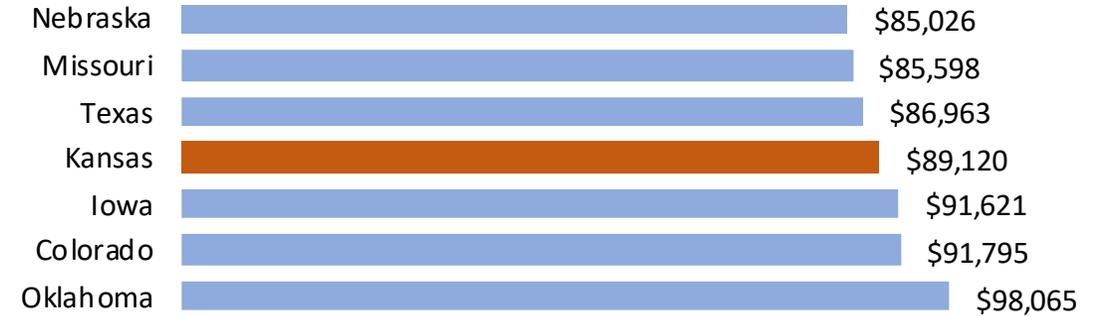
After adjusting for differences in price level, engineers make between \$15K to \$20K less per year.

# 2022 Salaries in Kansas and nearby states for engineers (continued)

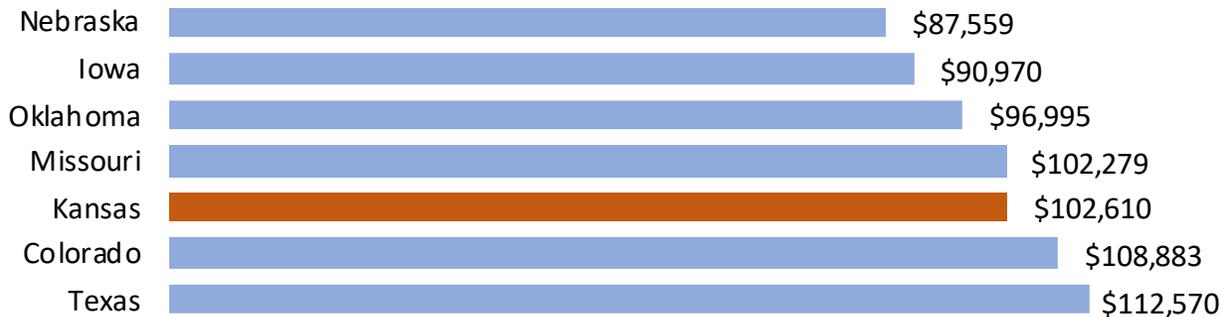
## Environmental Engineers



## Civil Engineers



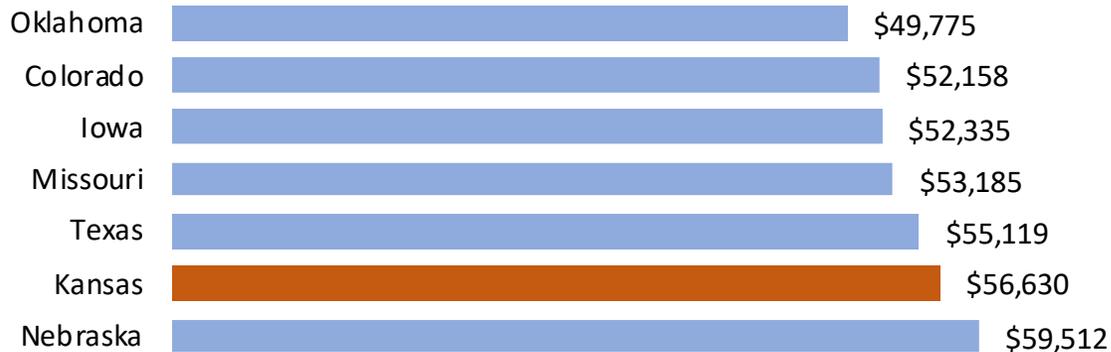
## Electronics Engineers, Except Computer



Salaries for environmental, civil and electronics engineers are much more competitive.

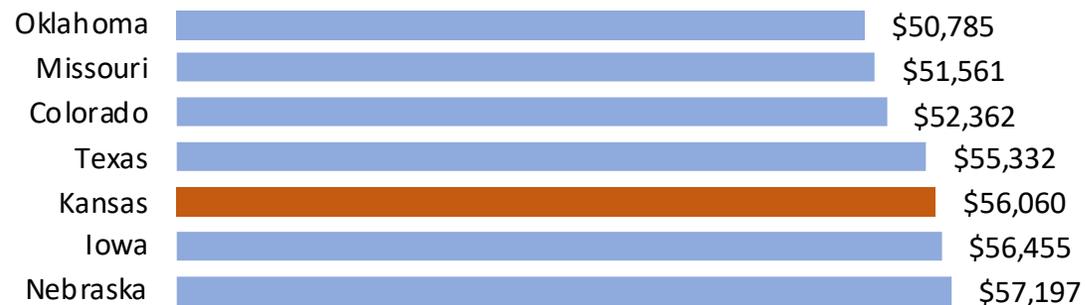
# 2022 Salaries in Kansas and nearby states for K-12 teachers

## Kindergarten Teachers, Except Special Education



- Kansas pays competitive salaries for elementary school teachers.

## Elementary School Teachers, Except Special Education

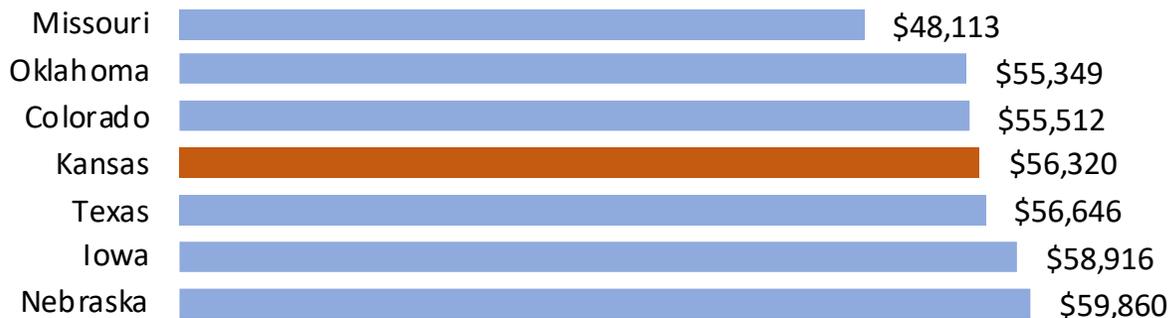


# 2022 Salaries in Kansas and nearby states for K-12 teachers

## Middle School Teachers, Except Special and Career/Technical Education



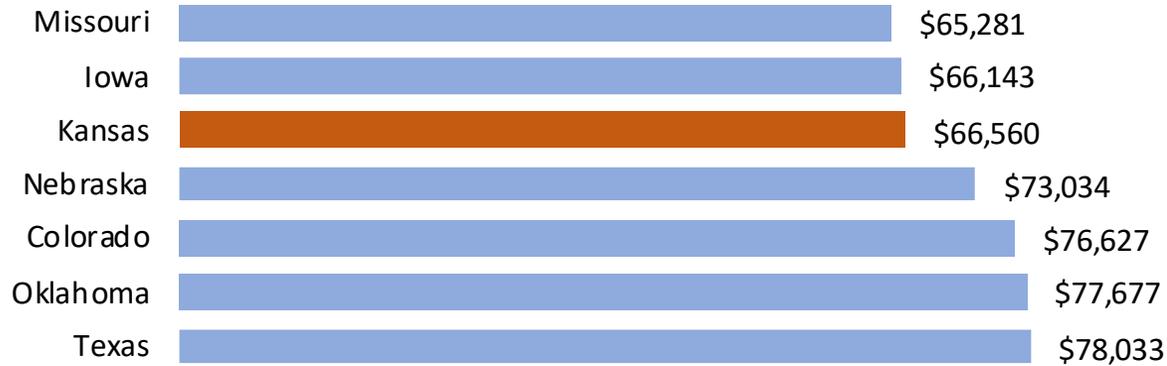
## Secondary School Teachers, Except Special and Career/Technical Education



- Kansas middle school teachers receive the highest salaries.
- Kansas high school teachers are in the middle compared to surrounding states.
- The relatively higher salaries in elementary and middle school are “averaged out” by relatively lower high school salaries to put Kansas somewhere in the middle in terms of teacher salaries.

# 2022 Salaries in Kansas and nearby states for nurses

## Registered Nurses



- Kansas Nurses and Nurse practitioners make less than similar workers in other states.

## Nurse Practitioners



# 2022 Salaries in Kansas and nearby states for other select occupations

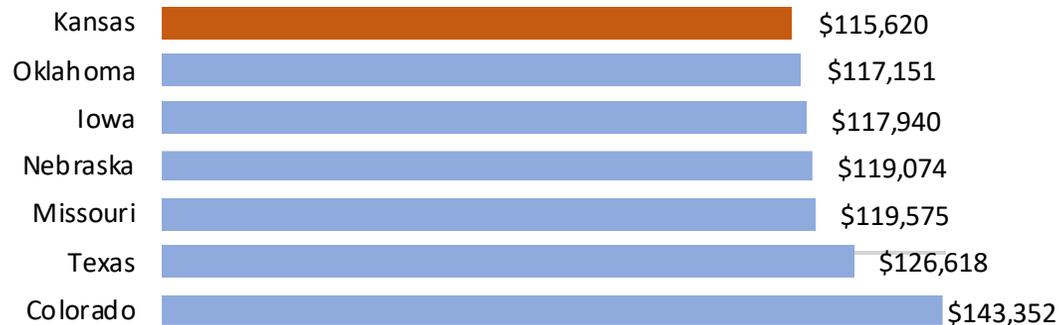
## Accountants and Auditors



## Information Security Analysts\*



## Human Resources Managers



\*No Nebraska and Oklahoma data

Kansas accountants, human resources managers and information Security analysts make less than similar workers in nearby states.

# Conclusions

- Based on demand projections, Kansas will need 34,000 workers in the next decade with higher education credentials than are expected to remain in the state.
- Kansas exports trained workers to Colorado, Texas and Missouri.
  - Missouri out-migration is driven by moving across the border in Kansas City.
- Compared to surrounding states, Kansas pays low salaries.
  - This likely affects retention and migration.

# Conclusions

- How can Kansas increase the number of degree holders working in the state by approximately 3,400 per year?
  - Work with Legislature and KSDE to improve college readiness of K-12 students and maintain the affordability of KBOR institutions.
  - Let employers know that higher wages elsewhere are attracting skilled labor out of the state.
  - Loan forgiveness programs for graduates in fields of high demand (e.g. nurses, engineers)

# Thank You!

**Thank You**  
*Mahalo*  
**Kiitos**  
*Tack*  
**Toda**  
*Grazie*  
**Thanks**  
*Obrigado*  
**Takk**  
*Danke*  
**Gracias**  
**Merci**