



KANSAS BOARD OF REGENTS

University Engineering Initiative Act (UEIA)

The UEIA passed on May 25, 2011 providing \$105.0 million to the three schools over the ten-year period of the Act. Each school is provided \$3.5 million per year. Funds are from the Expanded Lottery Act Revenues Fund (not the State General Fund).

The UEIA authorized the Board and the universities to acquire, construct and equip engineering facilities on state-owned property for purposes of educating engineers, upon consultation with the Secretary of Commerce and the Joint Committee on State Building Construction. Each of the three universities devoted resources to enhancing faculty numbers to deliver instruction to more students, which also required additional or improved facilities.

Uses of the UEIA Funding (FY 2013-FY 2020)

Kansas State University: a \$45.0 million Engineering Complex Addition was constructed to accomplish the goals of the UEIA with the goal of increasing the annual number of engineering graduates in the state by 56% by 2021. The College of Engineering at Kansas State University has the largest undergraduate engineering enrollment in the state and was previously at capacity for facilities and faculty. Additional space was required for classes, labs, and offices to accommodate enrollment growth and the additional faculty and support staff.

- \$23.1 M Facilities (classroom, lab, office, and study space)
- \$4.9 M Graduate Teaching Assistants (30 per year)

The University of Kansas has dedicated the entire state support for engineering to facilities – the funds are used for debt service on the construction, with the state funding providing about 70% annually; KU comes up with the rest within their required match. All of the expenses in the match are directly related to the new faculty (startup expenses which include students, supplies and equipment) and the expenses related to having a higher enrollment. These enrollment expenses would be technology needed for labs, undergraduate Teaching Assistants, scholarships for the new students, Graduate Teaching Assistants for the College to support the increased enrollments in their classes and building improvements for the extra teaching/lab space. In addition, KU has also paid for all the utilities associated with the building.

- \$4.4 M Construction
- \$23.3 M Debt Service

Wichita State University

- \$3.7 M Graduate Teaching Assistants (30 per year), student salaries, scholarships
- \$2.8 M Engineering Student Success Center
- \$2.4 M Lecturer/Teaching Expenses
- \$6.6 M Construction, Equipment, Supplies and Services
- \$12.3 M Debt Service for John Bardo Center (housing 25 new hands-on teaching labs)

Amounts shown are as of June 30, 2020.

Engineering Graduate Salary Data

The following information was presented to the Board of Regents at the June 2020 Board meeting and at the Board retreat in August 2020. Using data submitted by the institutions via the Kansas Higher Education System (KHEDS), along with wage and employment data from the Kansas and Missouri Department of Labor agencies, the following information was generated for the Board's review.

Table 1: Kansas Engineering Graduates in Kansas and Missouri

Based on Department of Labor data for Kansas and Missouri, the following table provides a historical perspective of the number of Kansas engineering graduates who initially lived in either Kansas or Missouri.

Graduation Year	Total Kansas Engineering Graduates	Graduates Who Initially Stayed in Kansas	Graduates Who Initially Went to Missouri	Kansas & Missouri Combined
2012	1,029	491 (47.7%)	82 (8.0%)	573 (55.7%)
2013	1,017	431 (42.4%)	108 (10.6%)	539 (53.0%)
2014	1,134	474 (41.8%)	127 (11.2%)	601 (53.0%)
2015	1,165	510 (43.8%)	132 (11.0%)	642 (55.1%)
2016	1,285	535 (41.6%)	163 (12.7%)	698 (54.3%)
2017	1,348	530 (39.3%)	181 (13.4%)	711 (52.7%)
2018	1,565	633 (40.4%)	187 (11.9%)	820 (52.4%)
2019	1,496	642 (42.9%)	186 (12.0%)	828 (55.3%)

Excluding the first year of analysis (AY 2012), historically, the percentage of Kansas engineering graduates staying in Kansas or moving to Missouri have remained consistent, with small deviations from year to year. On average approximately 41.8 percent of the graduates have initially stayed in Kansas while 11.8% have moved to Missouri.

Table 2: Trend Data Showing Kansas Engineering Graduates Who Move Back to Kansas or Missouri

Over their career, engineers change work locations for a variety of reasons. The following table shows a historical perspective of Kansas engineering graduates who have moved back to Kansas or Missouri.

Graduation Year	Engineers in Kansas Upon Graduation	Engineers in Kansas in 2019 By Class	Engineers in Missouri Upon Graduation	Engineers in Missouri in 2019 by Class
2012	491	413	82	130
2013	431	375	108	123
2014	474	437	127	135
2015	510	446	132	150
2016	535	478	163	174
2017	530	490	181	191
2018	633	642	187	189
2019	642	642	186	186
Net Change		-321	113	

Table 2 shows that Kansas engineering graduates are slowly leaving Kansas as they gain experience, even when those who have moved back are taken into consideration. Over the same period, Kansas engineering graduates have gravitated to Missouri with the net total number increasing by 113.

Table 3: Average Wages for Kansas Engineering Graduates in Kansas and Missouri

Using Department of Labor data for Kansas and Missouri, average wages for Kansas engineering graduates by year of graduation have been provided in the following table.

Graduation Year	Average Wages in Kansas by Graduation Year	Average Wages in Missouri by Graduation Year
2012	\$92,158	\$112,440
2013	\$87,440	\$99,828
2014	\$84,124	\$102,028
2015	\$76,899	\$90,754
2016	\$70,578	\$83,400
2017	\$66,222	\$75,451
2018	\$62,510	\$73,757
2019	\$56,196	\$62,101

The results from Table 3 show that on average, Kansas engineering graduates earn more in Missouri than they do in Kansas. The salary differences are larger for engineers with greater work experience.

Engineering Student Survey

In Fall 2019 and Winter 2020, Board staff surveyed engineering students at all three universities with most survey respondents graduating in Spring 2020. The pandemic impacted survey participation, but 918 students responded.

61.3 percent participated in an internship as part of the program
59.2 percent of those with an internship received a job offer from the company

83.4 percent reported their post-graduation plan was employment in their field
12.2 percent planned to go on to graduate or professional school

69.7 percent were Kansas residents

38.8 percent reported an intention to remain in Kansas
29.6 percent did not intend to remain in Kansas
31.6 percent were unsure of their plan

Top States Attracting Kansas Engineering Graduates
Colorado, Missouri, Texas

Median Engineer State Salaries*

	USA	Kansas	Colorado	Missouri	Texas
Description	Median Annual Earnings	Median Annual Earnings	Median Annual Earnings	Median Annual Earnings	Median Annual Earnings
Aerospace Engineers	\$115,211.20	\$102,876.80	\$115,523.20	\$116,438.40	\$124,196.80
Civil Engineers	\$86,632.00	\$76,024.00	\$86,798.40	\$78,249.60	\$92,310.40
Computer Hardware Engineers	\$114,608.00	\$81,224.00	\$116,022.40	\$97,073.60	\$116,292.80
Electrical Engineers	\$96,636.80	\$85,966.40	\$97,406.40	\$91,956.80	\$99,673.60
Industrial Engineers	\$87,027.20	\$77,313.60	\$97,115.20	\$82,950.40	\$102,315.20
Mechanical Engineers	\$87,360.00	\$76,814.40	\$92,976.00	\$80,080.00	\$94,577.60

Median Engineer Salaries with Cost of Living Adjustments*

	US	Kansas		Colorado		Missouri		Texas	
Description	COL Adjusted Median Annual Earnings	COL Index	COL Adjusted Median Annual Earnings	COL Index	COL Adjusted Median Annual Earnings	COL Index	COL Adjusted Median Annual Earnings	COL Index	COL Adjusted Median Annual Earnings
Aerospace Engineers	\$115,211.20	99.3	\$103,602.01	112.7	\$102,505.06	90.3	\$128,946.18	97.0	\$128,037.94
Civil Engineers	\$86,632.00	99.3	\$76,559.92	112.7	\$77,017.21	90.3	\$86,655.15	97.0	\$95,165.36
Computer Hardware Engineers	\$114,608.00	99.3	\$81,796.58	112.7	\$102,948.00	90.3	\$107,501.22	97.0	\$119,889.48
Electrical Engineers	\$96,636.80	99.3	\$86,572.41	112.7	\$86,429.81	90.3	\$101,834.77	97.0	\$102,756.29
Industrial Engineers	\$87,027.20	99.3	\$77,858.61	112.7	\$86,171.43	90.3	\$91,860.91	97.0	\$105,479.59
Mechanical Engineers	\$87,360.00	99.3	\$77,355.89	112.7	\$82,498.67	90.3	\$88,682.17	97.0	\$97,502.68

*Note: the reported salaries are at the midpoint of all engineers and do not represent starting salaries.