KANSAS BOARD OF REGENTS
COUNCIL OF CHIEF ACADEMIC OFFICERS

VIRTUAL MEETING AGENDA
Wednesday, May 14, 2025
9:00 a.m. – 10:00 a.m.
or upon adjournment of SCOCAO

The Council of Chief Academic Officers (COCAO) will meet virtually via Zoom. An in-person option will be available at the Curtis State Office Building at 1000 SW Jackson, Suite 530, Topeka, Kansas, 66612.

I.	**Call to Order**	Susan Bon, Chair	
	A. Roll Call & Introductions		
	B. Approve Minutes from April 16, 2025		p. 3
II.	**Council of Faculty Senate President's Update**	Norman Philipp, PSU	
III.	**First Reading**		
	A. MS in Computational Biology	Barbara Bichelmeyer, KU	p. 5
	B. BS in Statistics	Barbara Bichelmeyer, KU	p. 12
IV.	**Second Reading**		
	A. AAS in Food & Feed Manufacturing	Jesse Mendez, KSU	p. 21
	B. BS in Nuclear Engineering	Jesse Mendez, KSU	p. 47
V.	**Other Matters**		
	A. Changes to Qualified Admissions	Jesse Mendez, KSU	p. 56
	B. Request to Change Name of BA in Music to BA in Performing Arts	Jill Arensdorf, FHSU	p. 58
	C. Discuss Opportunities (new degree programs, partnerships, strategic initiatives, etc.) that Universities are Considering or Planning to Pursue in the Future	COCAO Members	
VI.	**Announcements**		
	Next COCAO Meeting – June 11, 2025 – Virtual Meeting		
VII.	**Adjournment**		

COUNCIL OF CHIEF ACADEMIC OFFICERS

The Council of Chief Academic Officers (COCAO), established in 1969, is composed of the academic vice presidents of the state universities. The Board's Vice President for Academic Affairs serves as an ex officio member, and the member from the same institution as the chairperson of the Council of Presidents serves as chairperson of the Council of Chief Academic Officers. The chief academic officers of the University of Kansas Medical Center and Washburn University are authorized to participate as non-voting members when agenda items affecting those institutions are to be considered. The Council of Chief Academic Officers meets monthly and reports to the Council of Presidents. The Council of Chief Academic Officers works with the Board Academic Affairs Committee through the Vice President for Academic Affairs. Membership includes:

Jesse Mendez	K-State	Susan Bon, Chair	PSU
Brent Thomas	ESU	John Fritch	Washburn
Jill Arensdorf	FHSU	Monica Lounsbery	WSU
Barbara Bichelmeyer	KU	Rusty Monhollon	KBOR
Robert Klein	KUMC		

Council of Chief Academic Officers

AY 2025 Meeting Schedule

COCAO Academic Year 2024- 2025 Meeting Dates			
Meeting Dates	**Location (virtual or in-person)**	**Institutional Materials Due**	**New Program Requests Due**
September 18, 2024	Virtual	August 28, 2024	July 24, 2024
November 20, 2024	Kansas State University	October 30, 2024	September 25, 2024
December 18, 2024	Virtual	November 25, 2024	October 21, 2024
January 15, 2025	Virtual	December 24, 2024	November 19, 2024
February 12, 2025	Virtual	January 22, 2025	December 18, 2024
March 12, 2025	Virtual	February 19, 2025	January 15, 2025
April 16, 2025	Pittsburg State University	March 26, 2025	February 19, 2025
May 14, 2025	Virtual	April 23, 2025	March 19, 2025
June 11, 2025	Virtual	May 21, 2025	April 16, 2025

COCAO meets at 9:00 a.m. or upon adjournment of SCOCAO unless otherwise noted.

KANSAS BOARD OF REGENTS
COUNCIL OF CHIEF ACADEMIC OFFICERS
MINUTES
APRIL 16, 2025

The April 16, 2025, meeting of Council of Chief Academic Officers was called to order by chair Susan Bon at 8:53 a.m. The meeting was held in the Meadowlark room on the Pittsburg State University Campus, Overman Student Center 302 E Cleveland Ave, Pittsburg, KS 66762, with a virtual option available.

MEMBERS PRESENT:

Jesse Mendez, KSU	Barbara Bichelmeyer, KU	John Fritch, Washburn
Brent Thomas, ESU	Robert Klein, KUMC	Monica Lounsbery, WSU
Jill Arensdorf, FHSU	Susan Bon, PSU	Rusty Monhollon, KBOR (*ex officio)*

APPROVAL OF MINUTES
Jill Arensdorf moved that the minutes of the March 12, 2025, meeting be approved. Jesse Mendez seconded, and the motion carried unanimously.

COUNCIL OF FACULTY SENATE PRESIDENTS UPDATE
Council of Faculty Senate Presidents Chair Norman Philipp provided an update on legislative matters that CoFSP has been monitoring, including the status of HB 2348, which did not pass this session. He expressed gratitude for KBOR's support of the Blue-Ribbon Commission on Higher Education and shared his anticipation for future developments. Regarding the Faculty of the Year Award, one institution is still finalizing its criteria; however, all institutions are expected to submit a complete list of nominees for all three categories by May. One institution is still finalizing the Faculty and Staff of the Year Award criteria. Still, all institutions are expected to submit a complete list of nominees for all three tiers by May.

FIRST READING

AAS IN FEED AND FOOD MANUFACTURING – KSU
Jesse Mendez introduced Dr. Dan Moser, Associate Dean for Academic Programs for the College of Agriculture. Dr. Moser provided an overview of the proposal, stating that this program will address a national shortage in this field. The program would be unique to Kansas and the surrounding area, as only three other land-grant universities currently offer similar programs nationally.

BS IN NUCLEAR ENGINEERING – KSU
Jesse Mendez introduced Vice Provost Margaret Mohr-Schroeder, who provided an overview of the proposal. This program would be the only nuclear program in the state of Kansas. KSU already has qualified faculty and is equipped to offer such a program.

SECOND READING

BBA IN SUPPLY CHAIN MANAGEMENT - PSU
Susan Bon introduced Dr. Paul Grimes, Dean of the College of Business. Dr. Grimes shared that the program is proposed in cooperation with the College of Technology and the Industrial Distribution program. Both programs will share the same General Education package and major courses in supply chain and Distribution. Students earning the BBA will take basic business courses, and the industrial distribution students will take the basic technology courses. The programs require adding two new courses, one in business and one in technology. Jill Arensdorf moved to approve the BBA in Supply Chain Management at PSU. Monica Lounsbery seconded, and the motion carried unanimously.

BS IN INDUSTRIAL DISTRIBUTION - PSU

Susan Bon introduced Dr. Andrew Klenke, Chair for the School of Technology and Workforce Learning. Dr. Klenke echoed the information provided by Dr. Grimes. Monica Lounsbery moved to approve the BS in Industrial Distribution at PSU. Jill Arensdorf seconded, and the motion carried unanimously.

MED APPLIED BEHAVIORAL ANALYSIS - WSU

Monica Lounsbery introduced Dr. Jennifer Friend, Dean of the College of Applied Studies, and Dr. Angela Beeler, Coordinator for the School of Psychology & Applied Behavioral Analysis, from the Department of Intervention Services, Leadership in Education. Dr. Beeler shared that this degree would be a total of thirty-six credit hours, twenty-one of which are currently being offered. Three new courses will be created without the need for faculty changes. This program will better accommodate students needing a master's degree to sit for their Board Certified Behavior Analyst (BCBA) exam. The need for BCBAs has increased both in Kansas and the rest of the nation. Jill Arensdorf moved to approve the MEd Applied Behavioral Analysis at WSU. Jesse Mendez seconded, and the motion carried unanimously.

MS IN FORENSIC BIOLOGY - WSU

Monica Lounsbery introduced Dr. David Eichhorn, Dean of the College of Liberal Arts and Sciences, and Dr. Yumi Suzuki, Interim Director for Forensic Biology, Firearms, and Criminal Investigations. Dr. Suzuki shared that the proposed programs in Forensic Biology and Forensic Firearms focus on the applied learning experience in the ATF lab on campus at WSU. These proposals create a talent pipeline to local, state, and federal crime labs. The Forensic Biology program will consist of thirty-four credit hours. Jill Arensdorf moved to approve the MS in Forensic Biology at WSU. Jesse Mendez seconded, and the motion carried unanimously.

MS IN FORENSIC FIREARMS - WSU

Dr. Suzuki shared that the Forensic Firearms program will require thirty credit hours and that both traditional and professional students are expected to enroll in the Forensic Biology and Forensic Firearms programs. Barbara Bichelmeyer moved to approve the MS in Forensic Firearms at WSU. Jesse Mendez seconded, and the motion carried unanimously.

OTHER MATTERS

REQUEST TO CHANGE NAME OF BA IN ENGLISH TO BS IN ENGLISH - PSU

Susan Bon requested approval to change the name of the BA in English to BS in English. Jesse Mendez moved to approve the change. Monica Lounsbery seconded, and the motion carried unanimously.

FACULTY & STAFF TUITION PROPOSAL FOLLOW-UP

Council of Faculty Senate Presidents Chair Norman Philipp shared that the updated data collected was presented to COBO at their April meeting. This updated data was also shared with the CAOs via email. COBO has requested additional information to include aggregated data by university to show the projected number of faculty and staff who might utilize this tuition proposal, as well as further information on the cost implications and the projected monetary value of the tuition proposal. Chair Philipp shared that COBO has expressed interest in piloting the first two phases of the proposal (online and hybrid) before considering phase three (in person). Additional data and discussions will continue to be shared with the council as they are received.

ANNOUNCEMENTS

Chair Susan Bon provided a reminder that the next COCAO meeting will be held on May 14.

ADJOURNMENT

Brent Thomas moved that the meeting be adjourned. Jill Arensdorf seconded, and the motion carried. The meeting adjourned at 9:24 a.m.

Program Approval

Summary

Universities may apply for approval of new academic programs following the guidelines in the Kansas Board of Regents Policy Manual. The University of Kansas has submitted an application for approval and the proposing academic unit has responded to all of the requirements of the program approval process.

May 14, 2025

I. General Information

A. Institution University of Kansas

B. Program Identification

Degree Level:	Master's
Program Title:	Computational Biology
Degree to be Offered:	Master of Science in Computational Biology
Responsible Department or Unit:	College of Liberal Arts and Sciences/ Computational Biology Program
CIP Code:	26.1104
Modality:	Face-to-Face
Proposed Implementation Date:	Fall 2026

Total Number of Semester Credit Hours for the Degree: 32

II. Clinical Sites: Does this program require the use of Clinical Sites? No

III. Justification

Computational Biology is an interdisciplinary science at the interface of biology, chemistry, medicine, mathematics, and computer science. Its goal is the development and application of computational approaches to studies of life processes and improvement of human health and living conditions on Earth. In this current era of artificial intelligence and structural biology, the training of a new master's-level cadre in computational biology is of primary importance to basic, clinical and applied science in academia, industry, and many other segments of society.

The Computational Biology Program carries out fundamental research in life sciences, develops computer modeling approaches, fosters community-wide activities in computational biology and provides education for the new generation of researchers. The current need for this master's program is threefold: 1) Provide training in Kansas to prepare for predicted job market growth, 2) increase recruitment of competitive PhD students, and 3) increase support for existing students.

1) Providing training in Kansas to prepare for predicted job market growth is described in *section IV*.

2) With respect to increasing recruitment of competitive PhD students smart, self-aware students want to have plans and contingency plans. They may be excited about, and prepared for, earning a PhD. However, they are also aware that five to six years (average PhD duration) is a long commitment and that life is unpredictable. KU has not yet found another competing PhD program that does not have an off-ramp to a master's option. Though KU has world class, highly funded faculty in Computational Biology, asking students to choose our program that does not have a master's over competing programs where there is a contingency plan for a master's degree is increasingly difficult. Offering a master's degree will allow us to be competitive with other universities.

3) Finally, a master's option will increase support for existing students. PhD programs entail considerable time and challenges. Students may face various difficulties such as health or family issues or a change with their research focus prompting them to consider alternative paths. Even if they ultimately choose not to pursue a master's degree, having the option provides reassurance during challenging times.

Ultimately, this master's will be used to confer a credential to those who have already earned it to help them find suitable employment when they are unable to complete the doctoral program

IV. Program Demand:

Market Analysis

This Master's in Computational Biology will provide training in Kansas to prepare for predicted job market growth. KU commissioned a Lightcast analysis that demonstrates this.

Lightcast (2024) predicts an +8.3% growth of natural science managers over the next five years and a +7.43% growth of biological scientists over the next five years. The proposed master's program will help take advantage of this growth industry by providing training in increasingly high demand skills.

The following are skills that this program would train in (specialized skills, general skills, and software skills) that are predicted by Lightcast (2024) to be growing with respect to the market:

- Specialized skills in growth areas will include: Biology (25.7% projected skill growth), data analysis (25.8% projected skill growth), molecular biology (+16.0% projected skill growth), and data management (+19.9% projected skill growth).
- With respect to top common skills, the program will teach the following skills: research (+17.2% projected skill growth), writing (+11.8% projected skill growth), presentations (+23.0% projected skill growth), and problem solving (+11.3% projected skill growth).
- Software skills taught will include: Microsoft Power Point (+26.1% projected skill growth), and python programming (+24.5% projected skill growth).

This proposed master's program aims to attract top computational biology talent that may otherwise opt for enrollment in other Computational Biology PhD programs. Virtually all other PhD programs housed in colleges of arts and sciences at all competing universities offer terminal master's for those who wish to not complete their PhD. Even at KU, Computational Biology is the only PhD program in the College of Liberal Arts & Sciences that does not provide the option of leaving with a master's degree after completing coursework. Indeed, every other PhD program at KU-Lawrence has a master's program option. These programs increase interest in the PhD because they provide additional options for unknown futures.

It is notable that every single peer institution with a Computational Biology PhD program has such a master's degree option. This includes: University of Pittsburgh, Duke University, Brown University, and Carnegie Melon University. No other computational biology programs exist in the state or surrounding ones (Colorado, Missouri, Nebraska, Oklahoma).

This master's will support the recruitment of excellent PhD students and will give students an option that demonstrates their mastery of the subject should they decide to not continue to pursue the PhD.

V. Projected Enrollment for the Initial Three Years of the Program

Year	Total Headcount Per Year		Total Sem Credit Hrs Per Year	
	Full- Time	Part- Time	Full- Time	Part- Time
Implementation	1	0	15	0
Year 2	1	0	15	0
Year 3	1	0	15	0

VI. Employment

Graduates with a Master's Computational Biology have Lightcast-predicted growth skills and unique expertise in both molecular biology and computational techniques, positioning them for a variety of specialized roles in Kansas, particularly within growth sectors like healthcare, research, and biotechnology. Some potential career options include:

1. **Computational Biologist** – Computational biologists apply mathematical and computational approaches to biological data, often to understand complex biological systems. They can find roles in Kansas with research institutions, pharmaceutical companies, and agricultural biotechnology firms.
2. **Bioinformatics Engineer** – In this role, professionals design and implement software tools to manage and interpret biological data. Bioinformatics engineers are in demand in biotech companies, universities, and hospitals working on genomic research, drug discovery, and precision medicine.
3. **Proteomics Data Scientist** – Proteomics specialists analyze protein data to understand protein structure and function. This expertise is valuable in biomedical research, pharmaceutical development, and biotech firms focusing on drug discovery or biomarker research.
4. **Systems Biologist** – Systems biologists study interactions within biological systems, integrating molecular biology and computational techniques to understand complex processes in cells or ecosystems. Research institutions and biotechnology companies in Kansas may hire systems biologists for projects on human health, plant biology, or microbiology.
5. **Biopharmaceutical Scientist** – In the pharmaceutical industry, these scientists contribute to the development of new drugs by analyzing molecular data and conducting computational simulations. Kansas-based pharmaceutical companies and research organizations may hire for this role.
6. **Biomedical Research Technician** – In academic labs, hospitals, or biomedical companies, research technicians work on projects involving molecular biology and genetics, supporting research that may include analyzing DNA, RNA, or protein samples. With computational skills, they can also contribute to managing and analyzing data, which is highly valuable in precision medicine and genomics research.

These careers allow graduates to apply their specialized knowledge of molecular biology and computational analysis to address critical issues in healthcare, research and biotechnology, directly benefiting Kansas industries and communities.

VII. Admission and Curriculum

A. Admission Criteria

Accepted students must fulfill standard admission requirements of the College of Liberal Arts & Sciences Graduate Office:

- Proof of a bachelor's degree (and any post-bachelor's coursework or degrees) from a regionally accredited institution, or a foreign university with substantially equivalent bachelor's degree requirements
- Proof of English proficiency for non-native or non-native-like English speakers

- Additional requirements of the program:
  - Overall undergraduate GPA: ~ 3.5 (out of 4.0)

- Personal statement about candidate's career goals
- Bachelor's degree in natural sciences, mathematics, engineering, or another relevant field
- Three letters of recommendation
- English proficiency scores according to the College Graduate Office requirements for non-native speakers.

B. Curriculum

The program accepts students with a variety of backgrounds (expertise in chemistry, biology, computer science, or math), interests (algorithm development or algorithm implementation), and skills (those gifted in communication or coding), so ideal curriculum varies from student to student. Each student's curriculum is custom-tailored by the student in collaboration with their advisor to address any deficits from their undergraduate work and to prepare them to succeed as a scientist. Below is a sample semester-by-semester plan for the degree:

Year 1: Fall **SCH = Semester Credit Hours**

Course #	**Course Name**	**SCH = 9**
BINF 701	Computational Biology I	5
BIOL 636	Biochemistry I	4

Year 1: Spring

Course #	**Course Name**	**SCH = 8**
BINF 702	Computational Biology II	5
	Elective	3

Year 1: Summer

Course #	**Course Name**	**SCH = 1 or 3**
CHEM 816 or BIOL 817	Careers in Biomedical Sciences or Rigor, Reproducibility and Responsible Conduct of Research	1 or 3

Year 2: Fall

Course #	**Course Name**	**SCH = 7**
BINF 709	Topics in Computational Biology	1
	Electives	6

Year 2: Spring

Course #	**Course Name**	**SCH = 7**
BIOL 638	Biochemistry II	4
	Elective	3

Total Number of Semester Credit Hours ……. 32-34

VIII. Core Faculty

Note: * Next to Faculty Name Denotes Director of the Program, if applicable

FTE: 1.0 FTE = Full-Time Equivalency Devoted to Program

Faculty Name	**Rank**	**Highest Degree**	**Tenure Track Y/N**	**Academic Area of Specialization**	**FTE to Proposed Program**
Joanna Slusky	Professor	PhD	Y	Computational biology—	0.10

				protein docking	
Ilya Vakser*	Professor & Director	PhD	Y	Computational docking—protein design	0.20
Erik Holmstrom	Asst Professor	PhD	Y	RNA structure and protein interactions	0.10
Roberto De Guzman	Professor	PhD	Y	Nuclear magnetic resonance spectroscopy of proteins	0.10

Number of graduate assistants assigned to this program **0**

IX. Expenditure and Funding Sources

A. EXPENDITURES	First FY	Second FY	Third FY
Personnel – Reassigned or Existing Positions			
Faculty	$68,219	$137,328	$137,328
Administrators *(other than instruction time)*	$0	$0	$0
Graduate Assistants	$0	$0	$0
Support Staff for Administration (*e.g., secretarial*)	$0	$0	$0
Fringe Benefits *(total for all groups)*	$21,830	$43,945	$43,945
Other Personnel Costs			
Total Existing Personnel Costs – Reassigned or Existing	$90,049	$181,273	$181,273
Personnel – New Positions			
Faculty	0	0	0
Administrators *(other than instruction time)*	0	0	0
Graduate Assistants	0	0	0
Support Staff for Administration (*e.g., secretarial*)	0	0	0
Fringe Benefits *(total for all groups)*	0	0	0
Other Personnel Costs	0	0	0
Total Existing Personnel Costs – New Positions	0	0	0
Start-up Costs - One-Time Expenses			
Library/learning resources	0	0	0
Equipment/Technology	0	0	0
Physical Facilities: Construction or Renovation	0	0	0
Other	0	0	0
Total Start-up Costs	0	0	0
Operating Costs – Recurring Expenses			
Supplies/Expenses	0	0	0
Library/learning resources	0	0	0
Equipment/Technology	0	0	0
Travel	0	0	0

Other	0	0	0
Total Operating Costs	0	0	0
GRAND TOTAL COSTS	$90,049	$181,273	$181,273

B. FUNDING SOURCES *(projected as appropriate)*	Current	First FY (New)	Second FY (New)	Third FY (New)
Tuition / State Funds		$16,269	$16,269	$16,269
Student Fees		$150	$150	$150
Other Sources				
GRAND TOTAL FUNDING		$16,419	$16,419	$16,419
C. Projected Surplus/Deficit (+/-) (Grand Total Funding *minus* Grand Total Costs)		-$73,630	-$164,854	-$164,854

X. Expenditures and Funding Sources Explanations
Costs of reallocated personnel expenditures are listed; however, these expenses are already incurred for the doctoral program which averages ten majors annually.

A. Expenditures
Personnel – Reassigned or Existing Positions
KU will use existing infrastructure including faculty and staff time. Director Ilya Vakser will be responsible for reviewing and maintaining the academic catalog, updating and submitting assessment materials, and advising on academic requirements for students who have been counseled or have chosen to switch to the master's.

The Computational Biology program will not be creating new materials, as this degree would only be used for students who are recruited to the existing Computational Biology PhD program who decide that they would like to leave after having completed their coursework but before defending their dissertation. All of the courses in the master's degree are already being taught, but we included the instructional costs in the expenditures even though they will be incurred for the PhD program regardless of whether we add the master's degree.

Personnel – New Positions
No new faculty, staff hires, recruitment materials, facilities, or equipment will be necessary to offer this master's degree.

Start-up Costs – One-Time Expenses
No new faculty, staff hires, recruitment materials, facilities, or equipment will be necessary to offer this master's degree.

Operating Costs – Recurring Expenses
There are no recurring operating expenses.

B. Revenue: Funding Sources
The Master's in Computational Biology degree will be funded through standard tuition and fee revenue for students admitted to the doctoral program. 2024-2025 standard tuition for Lawrence Campus graduate students is

$453.30 per credit hour for resident students and $1,084.60 per credit hour for non-resident students. Non-resident tuition rates were used for these calculations. Student fees were calculated based on the $10 per credit hour course fee for CLAS effective Fall 2024.

C. Projected Surplus/Deficit

Year 1: -$71,441
Year 2: -$147,341
Year 3: -$147,341

XI. References

Lightcast Report. Program Overview; Data Analytics. Lightcast Q3 2024 Data Set. September 2024.

Program Approval

Summary

Universities may apply for approval of new academic programs following the guidelines in the Kansas Board of Regents Policy Manual. The University of Kansas has submitted an application for approval and the proposing academic unit has responded to all of the requirements of the program approval process.

May 14, 2025

I. General Information

A. Institution University of Kansas

B. Program Identification

Degree Level:	Bachelor's
Program Title:	Statistics
Degree to be Offered:	Bachelor of Science
Responsible Department or Unit:	Department of Mathematics
CIP Code:	27.0501
Modality:	Face-to-Face
Proposed Implementation Date:	Spring 2026

Total Number of Semester Credit Hours for the Degree: 120

II. Clinical Sites: Does this program require the use of Clinical Sites? No

III. Justification

The B.S. in Statistics is aimed at students who desire to obtain rigorous training in Statistics to pursue careers that heavily utilize Statistics, or who are interested in continuing into graduate level studies of Statistics and its applications. As collecting and analyzing data is ubiquitous in about every human activity, statisticians can find employment in many areas of finance and corporate banking, data analytics and data science, medicine, actuarial science, insurance and business analytics, geological and atmospheric sciences, or government. This program will provide students with an interest in pursuing such jobs with an explicitly marketable degree and a set of technical skills with which to pursue those careers.

Additionally, the proposed B.S. in Statistics will address an unmet demand from the perspective of KU students. Currently, KU does not offer a mathematically rigorous, technically intensive undergraduate STEM oriented degree program in Statistics. The Department of Mathematics at KU is well positioned to meet this need.

IV. Program Demand: Market Analysis

Currently the only public university in Kansas that offers a Bachelor of Science or Bachelor of Arts degree with the same CIP Code is K-State, which is offered by the Department of Statistics. Conversely, all but one (University of Oregon) of KU's Peer Universities[1], has a program that offers either a B.A. or a B.S. in Statistics. The fact that all the other peer institutions have sustainable degree programs in Statistics indicates the viability of such a program at KU. Undergraduate programs also exist in Nebraska, Colorado, Oklahoma, and Missouri.

[1] As approved by KBOR in 2013.

Additionally, the proposed B.S. in Statistics is designed as a multidisciplinary undergraduate program that will provide students not only with a solid mathematical foundation in statistical sciences, but also the opportunity to gain experience about important applications of statistics from other natural science, social science, business, and engineering departments. As one of only 187 institutions in the country classified with the highest-level research spending and doctoral production, and as the home of several nationally ranked Engineering and STEM programs, as well as proximity to both Kansas City and Topeka, KU is in an ideal position to offer such a statistics degree program.

A trend analysis of fifty institutions, based on Lightcast (2024) data indicates that the BS in Statistics remains in demand with long-term growth visible over an 11-year period (2012-2023). Nationwide, the degree has seen a remarkable 200% increase in completions from 1,139 in 2012 to 3,418 in 2023 (Lightcast, 2024).

BS in Statistics graduates are highly sought after in several occupations, including data scientists, natural sciences managers, mathematical science occupations, actuaries, statisticians, survey researchers, statistical assistants, and mathematicians (Lightcast, 2024). As of 2023-2024, there were 158,000 job postings relevant to BS in Statistics graduates, marking a 4.3% increase in job postings. Additionally, all targeted occupations have experienced growth in annual openings, ranging from 0.89% to as high as 5.64% (Lightcast, 2024).

V. Projected Enrollment for the Initial Three Years of the Program

Year	Total Headcount Per Year		Total Sem Credit Hrs Per Year	
	Full- Time	Part- Time	Full- Time	Part- Time
Implementation	5	0	150	0
Year 2	10	0	300	0
Year 3	20	0	600	0

VI. Employment

Students with degrees in Statistics are well positioned to take jobs as either Statisticians or Data Scientists. According to the Bureau of Labor Statistics (BLS), there were 34,800 jobs as a Statistician in 2023, and the expected job growth between 2023-2033 is 11% (U.S. Department of Labor, n.d.). This is designated as "much faster than average". Further, the BLS indicates there were 202,900 jobs in Data Science in 2023, and the expected job growth between 2023-2023 is 36% (U.S. Department of Labor, n.d.). Again, this is designated as much faster than average.

In addition, according to the US Department of Labor's Occupational Information Network (O*NET), both "Statistician" and "Data Scientist" are considered "Bright Outlook" occupations, which is said to indicate occupations that are expected to grow rapidly in the next several years, will have a large number of job openings, or are new and emerging occupations (O*NET Online, n.d.).

VII. Admission and Curriculum

A. Admission Criteria

Qualified Admission criteria are used, as the program does not have separate admission requirements.

B. Curriculum

The curriculum below shows students enrolled in Calculus I that is aligned to the KBOR Math & Statistics Discipline Area for general education. Students who instead start in College Algebra the first semester are still able to complete the degree in four years with 120 credit hours.

Year 1: Fall SCH = Semester Credit Hours

Course #	Course Name	SCH=15
ENGL	KBOR English Discipline Area	3
S&BS	KBOR Core Social & Behavioral Science Discipline Area	3
	KBOR Natural & Physical Science Designated Area	4
MATH 125	KBOR Mathematics & Statistics Discipline Area Calculus I	5

Year 1: Spring

Course #	Course Name	SCH=17
ENGL	KBOR English Discipline Area	3
COMS	KBOR Communications Discipline Area	3
EECS 138, EECS 168 or EECS 169	Introduction to Computing Programming I Programming I: Honors	3
MATH 126	Calculus II	5
	Elective	3

Year 2: Fall

Course #	Course Name	SCH=16
A&H	KBOR Arts & Humanities Discipline Area	3
S&BS	KBOR Core Social & Behavioral Science Discipline Area	3
MATH 127	Calculus III	5
MATH 290	Elementary Linear Algebra	2
	Elective	3

Year 2: Spring

Course #	Course Name	SCH=15
A&H	KBOR Arts & Humanities Discipline Area	3
	KBOR Core Institutional Designated Area	3
MATH 627	Probability	3
	Elective	3
	Elective	3

Year 3: Fall

Course #	Course Name	SCH=15
	KBOR Core Institutional Designated Area	3
	Course from MathStats List	3
	Course from MathStats/ApplStats List	3
MATH 628	Mathematical Theory Statistics	3
	Elective	3

Year 3: Spring

Course #	Course Name	SCH=15
	Course from MathStats List	3
	Elective	3
	Elective	3
	Elective	3
	Elective	3

Year 4: Fall

Course #	Course Name	SCH=15
	Course from MathStats/ApplStats List	3
	Elective	3
	Elective	3
	Elective	3
	Elective	3

Year 4: Spring

Course #	Course Name	SCH=12
	Elective	3
MATH 690	Capstone in Statistics	3
	Elective	3
	Elective	3

Total Number of Semester Credit Hours ……. 120

VIII. Core Faculty

Note: * Next to Faculty Name Denotes Director of the Program, if applicable
FTE: 1.0 FTE = Full-Time Equivalency Devoted to Program

Faculty Name	Rank	Highest Degree	Tenure Track Y/N	Academic Area of Specialization	FTE to Proposed Program
Tyrone Duncan	Professor	Ph.D.	Y	Probability & Statistics	1.0
Jin Feng	Professor	Ph.D.	Y	Stochastic Analysis	1.0
Weizhang Huang	Professor	Ph.D.	Y	Computational Mathematics	0.25
Zhipeng Liu	Professor	Ph.D.	Y	Probability / Math Physics	1.0
Myunghyun Oh	Assoc. Prof.	Ph.D.	Y	Applied Math	0.25
Joonha Park	Asst. Prof.	Ph.D.	Y	Statistics	1.0
Bozenna Pasik-Duncan	Professor	Ph.D.	Y	Statistics / Stochastic Control	1.0
Zsolt Talata	Assoc. Prof.	Ph.D.	Y	Statistics	1.0
Erik Van Vleck	Professor	Ph.D.	Y	Applied Math / Comp. Math	0.25

Number of graduate assistants assigned to this program ……. 1

IX. Expenditure and Funding Sources

A. EXPENDITURES	First FY	Second FY	Third FY
Personnel – Reassigned or Existing Positions			
Faculty	$45,000	$140,040	$241,250
Administrators *(other than instruction time)*	0	0	0
Graduate Assistants	$10,500	$10,710	$22,000
Support Staff for Administration (*e.g., secretarial*)	0	0	0

Fringe Benefits *(total for all groups)*	$15,240	$45,670	$78,960
Other Personnel Costs	0	0	0
Total Existing Personnel Costs – Reassigned or Existing	$70,740	$196,420	$342,210
Personnel – New Positions			
Faculty	0	0	0
Administrators *(other than instruction time)*	0	0	0
Graduate Assistants	0	0	0
Support Staff for Administration (*e.g., secretarial*)	0	0	0
Fringe Benefits *(total for all groups)*	0	0	0
Other Personnel Costs	0	0	0
Total Existing Personnel Costs – New Positions	0	0	0
Start-up Costs - One-Time Expenses			
Library/learning resources	0	0	0
Equipment/Technology	0	0	0
Physical Facilities: Construction or Renovation	0	0	0
Other	0	0	0
Total Start-up Costs	0	0	0
Operating Costs – Recurring Expenses			
Supplies/Expenses	0	0	0
Library/learning resources	0	0	0
Equipment/Technology	0	0	0
Travel	0	0	0
Other	0	0	0
Total Operating Costs	0	0	0
GRAND TOTAL COSTS	$70,740	$196,420	$342,210

B. FUNDING SOURCES *(projected as appropriate)*	Current	First FY (New)	Second FY (New)	Third FY (New)
Tuition / State Funds		$90,125	$180,251	$360,504
Student Fees		$1,500	$3,000	$6,000
Other Sources		0	0	0
GRAND TOTAL FUNDING		$91,625	$183,251	$366,504

C. Projected Surplus/Deficit (+/-) (Grand Total Funding *minus* Grand Total Costs)		$20,885	-$13,169	$24,294

X. Expenditures and Funding Sources Explanations

A. Expenditures

Personnel – Reassigned or Existing Positions

Existing Math faculty members will teach the required core curriculum and a rotation of Math electives that can count towards the Statistics electives. These courses will be taught as part of their regular course load in Math. The number of Math faculty teaching courses will be limited to two courses in the first year, but FTE dedicate to teaching courses in the degree will ramp up in years two and three as the initial cohort progresses through the curriculum and new students enroll in the degree.

One Math GTA from the currently funded Math GTA pool will assist with large Math sections each year.

Personnel – New Positions

No new positions will be required to teach the core curriculum or electives required for the degree.

Start-up Costs – One-Time Expenses

None

Operating Costs – Recurring Expenses

None

B. Revenue: Funding Sources

The Statistics degree will be fully funded through standard tuition and fee revenue. AY 2024-2025 standard tuition for Lawrence Campus students is $365.60 per credit hour for resident students and $976.60 per credit hour for non-resident students. Consistent with the overall undergraduate student credit hour distribution on the Lawrence campus, it is estimated that 61.5% of student credit hours will be from resident students and 38.5% from non-resident students, and revenue projections from base tuition were calculated using a weighted average of $600.84 per credit hour. Student fees were calculated based on the $10 per credit hour course fee for CLAS effective Fall 2024.

C. Projected Surplus/Deficit

Year 1: $20,885
Year 2: -$13,169
Year 3: $24,294

XI. References

Bureau of Labor Statistics, (n.d.) *Occupational Outlook Handbook, Mathematicians and Statisticians*, U.S. Department of Labor. Retrieved March 17, 2025, from https://www.bls.gov/ooh/math/mathematicians-and-statisticians.htm.

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Lightcast Report. Program Overview; Data Analytics. Lightcast Q3 2024 Data Set. September 2024.

O*NET Online (n.d.). *Statisticians, 15-2041.00.* Retrieved April 11, 2025, from https://www.onetonline.org/link/summary/15-2041.00

O*NET Online (n.d.). *Data Scientists, 15-2051.00.* Retrieved April 11, 2025, from https://www.onetonline.org/link/summary/15-2051.00

Attachment

List of MathStats and ApplStats Courses

A. List MathStats Courses

Dept	Code	Title	Hours
Mathematics	MATH 582	Computational Data Science	3
Mathematics	MATH 605	Applied Regression Analysis	3
Mathematics	MATH 608	Statistical Data Science	3
Mathematics	MATH 624	Discrete Probability	3
Mathematics	MATH 630	Actuarial Mathematics	3
Mathematics	MATH 717	Nonparametric Statistics	3
Mathematics	MATH 727	Probability Theory	3
Mathematics	MATH 728	Statistical Theory	3
Mathematics	MATH 750	Stochastic Adaptive Control	3

B. List ApplStats Courses

Department	Code	Title	Hours
Aerospace Engineering	AE 768	Orbit Determination	3
Biology	BIOL 370	Introduction to Biostatistics	4
Business	BSAN 415	Data Analysis and Forecasting	3
Business	BSAN 450	Data Mining and Predictive Analytics	3
Civil, Envr, & Arch Engineering	CE 711	Probabilistic Design and Reliability	3
Civil, Envr, & Arch Engineering	CE 760	Stochastic Hydrology	3
Economics	ECON 526	Introduction to Econometrics	3
Economics	ECON 715	Elementary Econometrics	3
Economics	ECON 716	Econometric Forecasting	3
Electrical Engr & Computer Science	EECS 563	Introduction to Communication Networks	3

Electrical Engr & Computer Science	EECS 658	Introduction to Machine Learning	3
Electrical Engr & Computer Science	EECS 769	Information Theory	3
Educational Psychology	EPSY 710	Introduction to Statistical Analysis	3
Geography	GEOG 716	Advanced Geostatistics	3
Geology	GEOL 504	Inverse Problems for Geoscientists	3
Mechanical Engineering	ME 788	Optimal Estimation	3
Physics & Astronomy	PHSX 615/ EPHX 615	Numerical & Computational Methods in Physics	3
Physics & Astronomy	PHSX 616/ EPHX 616	Physical Measurements	4
Physics & Astronomy	PHSX 671/ EPHX 671	Thermal Physics	3
Psychology	PSYC 500	Intermediate Statistics in Psychological Research	3
Psychology	PSYC 599	Data III: Data Management	3
Psychology	PSYC 612	Data IV: Introduction to Machine and Statistical Learning	3
Psychology	PSYC 699/ POLS 699	Community Data Lab	3

Program Approval

Summary

Universities may apply for approval of new academic programs following the guidelines in the Kansas Board of Regents Policy Manual. Kansas State University has submitted an application for approval and the proposing academic unit has responded to all of the requirements of the program approval process. The Kansas Association of Community Colleges has sent a letter outlining concerns with the proposal (Appendix IV) and K-State has provided a response (Appendix V).

May 14, 2025

I. General Information

A. Institution Kansas State University

B. Program Identification

Degree Level:	Associate
Program Title:	Food and Feed Manufacturing
Degree to be Offered:	Associate of Applied Science
Responsible Department or Unit:	College of Agriculture/Department of Grain Science and Industry
CIP Code:	1.1002 Food Technology and Processing
Modality:	Hybrid
Proposed Implementation Date:	Fall 2025

Total Number of Semester Credit Hours for the Degree: 60

II. Clinical Sites: Does this program require the use of Clinical Sites? No

III. Justification

The demand for a skilled workforce to fill supervisory, operational, and technical roles in the milling, baking, feed, and pet food industries is immense, and no other institution in the United States is meeting this need comprehensively. Currently, Kansas State University trains leaders for these industries. However, the creation of an Associate of Applied Science (AAS) degree in food and feed manufacturing would directly address the industry's labor shortages by providing practical, targeted education.

This program would serve two important demographics. First, it would offer a pathway for existing industry professionals seeking to enhance their knowledge and skills while maintaining their current employment. With the flexibility of an online AAS program and core courses designed as five-week online courses or one-week in-person practicums, these professionals can advance their careers with minimal disruption to their work schedules. Second, the program would appeal to students who prefer to enter the workforce quickly through a two-year technical degree, rather than pursuing a traditional four-year degree. These graduates would be well-prepared to step into the workforce immediately, filling critical roles in feed manufacturing and related fields.

Having more educated and highly qualified employees directly benefits the industry. A more skilled workforce leads to greater operational efficiency, innovation, and overall success for companies in this sector.

IV. Program Demand

A. Survey of Student Interest

A survey was not conducted to address student demand. However, an industry survey was conducted to seek guidance on the development of this program. The survey received 78 responses across the Feed, Pet Food,

Milling, Baking, and Grain Elevator industries. The industry response provided support for this program in training areas of industry knowledge, quality, management, leadership, equipment identification/operation, basic/applied math, ingredient identification, written communication, oral communication, computer application, data management, supervision, employee safety, regulatory, equipment & facility maintenance, food/feed safety. See Appendix I for industry support letters.

B. Market Analysis

The industry market analysis report was conducted by the K-State Market Intelligence & Analysis Team. The data in this report is from Lightcast™, a labor market analytics company that curates and maintains comprehensive labor market data sets. The degree completion data are from IPEDS, reported by CIP code. Labor data is from Quarterly Census of Employment Wages from the Bureau of Labor Statistics and Bureau of Economic Analysis. The regions analyzed include: Arkansas, Colorado, Illinois, Iowa, Kansas, Missouri, Nebraska, Oklahoma, and Texas. To provide further analysis in food and feed manufacturing, we used five metrics:

- Regional Unique Job Postings (2019-2023)
- Projected Industry Growth (2023-2032) • Top Ten Job Titles (2023)
- Top Ten Companies by Unique Job Postings (2023)
- Example Job Postings with Company, Location, and Salary Information (2023)

The five industries reviewed are:

1. Grain Processing Industry
2. Flour and Grain Milling Industry
3. Feed Industry
4. Baking Industry
5. Pet Food Industry

Completions for associate-level programs in grain/feed processing increased nationwide from 2013 to 2022 (IPEDS). Nationally, total completions fluctuated but increased over 350% during that time. Outside of 2016, there were zero online program completions nationwide and within the nine-state region. Although total nationwide completions are growing, the same is not true for the nine-state region (Arkansas, Colorado, Illinois, Iowa, Kansas, Missouri, Nebraska, Oklahoma, Texas) which decreased 66.7% from 2013 to 2022. In 2022, associate degrees accounted for 27 completions, while there were 56 bachelor's completions and 86 awards of less than one year. Only one institution in Kansas, Garden City Community College, reported associate degree completions in 2022 under the 01.0401 CIP code.

Job postings were filtered to include data on Feed Mill Operators, Feed Mill Managers, and Feed Mill Supervisors, the three job titles that we found were most relevant. The nationwide job postings growth for these positions has been over 41% since 2019, but the overall number of jobs is not very high. Feed Mill Operators was the job title with the most postings, tallying 493 last year. Feed Mill Operators also had the largest percent growth (66.6%) in postings from 2019 to 2023. The top employers recruiting for these types of positions include cattle feeders and large companies in the food industry like Tyson Foods, Con Agra, and Smithfield Foods.

A data point of note is that Iowa had the most job postings in the U.S. in 2023, with the rest of the Central U.S. showing demand for these workers, as well. Some of the top requested skills within job postings include agriculture, milling, warehousing and automation. A few of the top growing skills from 2023 revolve around workplace safety. They included hazard analysis and critical control points, preventative maintenance, and safety culture.

There were no associate degrees in grain science, milling, or a combination of the two in the market research scan of similar programs in the nation. The list of similar programs includes three certificates, one minor, and a Career Studies Certificate program. Of these five programs, four of them are in feed milling and only one is offered online. Based on this scan, there is little to no competition in the associate's degree programs in grain or milling science.

V. Projected Enrollment for the Initial Three Years of the Program

Year	Total Headcount Per Year		Total Sem Credit Hrs Per Year	
	Full- Time	Part- Time	Full- Time	Part- Time
Implementation	10	20	150	120
Year 2	20	30	300	180
Year 3	35	40	525	240

VI. Employment

Data from the K-State Market Intelligence & Analysis team using Lightcast Analyst tool determined the current employment opportunities for Unique Job Postings within a 9-state region from 2019-2023. Unique job postings were searched for soybean and other oilseed processing, fats and oils refining and blending, flour milling, rice milling, wet corn milling, breakfast cereal manufacturing, animal food manufacturing, dog or cat food manufacturing, bread and bakery product manufacturing. Across these unique job postings within a 9-state region there were 1,074 jobs posted in 2023.

- For the grain processing industry (soybean and other oilseed processing and fats and oils refining and blending), in 2023 there were 80 total unique postings with +122.2% change in 5-year regional postings and a median salary of $64,800. Example employment opportunities included industrial technicians and operations assistant.
- For the flour and grain milling industry (flour milling, rice milling, wet corn milling, breakfast cereal manufacturing), in 2023 there were 111 total unique postings with +311% change in 5-year regional postings and a median salary of $58,900. Example employment opportunities included maintenance technician-millwright and maintenance control specialist.
- For the feed industry (animal food manufacturing), in 2023 there were 459 total unique postings with +59.4% change in 5-year regional postings and a median salary of $59,600. Example employment opportunities included Millwright/maintenance mechanic, processing technician, and laboratory technician.
- For the pet food industry (dog or cat food manufacturing), in 2023 there were 124 total unique postings with +359.3% change in 5-year regional postings and a median salary of $57,300. Example employment opportunities included filler operator, laboratory technician, and automation controls technician.
- For the baking industry (bread and bakery product manufacturing), in 2023 there were 300 total unique postings with +10% change in 5-year regional postings and a median salary of $64,300. Example employment opportunities included production supervisors, maintenance lead, mechanical/electrical technician.

VII. Admission and Curriculum

A. Admission Criteria

Qualified Admission criteria are used, as this program does not have separate admission requirements.

B. Curriculum

The 61-credit AAS in Food and Feed Manufacturing program is designed to equip students with the knowledge and skills necessary for a successful career in the grain, food, and feed industries. The curriculum prepares learners for both entry-level and supervisory positions in these rapidly advancing sectors. In addition to offering a solid technical foundation in areas such as ingredient purchasing, equipment maintenance, and operation, and facility oversight, the program emphasizes invaluable hands-on learning experiences.

This curriculum accommodates two types of learners: 1) current industry professionals seeking to earn their degree online while maintaining their jobs, and 2) traditional students aiming to complete a two-year technical degree to quickly enter the food and feed manufacturing or grain processing workforce. To support these

diverse needs, core classes are structured in 5-week, one-hour modules, allowing for greater flexibility.

Beyond technical training, our curriculum addresses additional skills that industry surveys indicate employers seek in candidates. Applied skills and professional specialization are emphasized, particularly through courses focusing on employee safety, food and feed safety, computer applications, and specialized areas relevant to food and feed manufacturing, including agronomy, animal science, agricultural safety, mechanical systems, entomology, food science, and others. Flexibility is also built into the specialization electives to allow for high school students to take advantage of completing targeted courses for free while in high school to help meet degree requirements. The flexible "Specialization Electives" component reflects the diverse areas within modern food and feed manufacturing, ensuring that our approach is tailored to the various career possibilities available to AAS graduates.

The program requires a total of 18 credits in core Food and Feed Manufacturing (FFM) major courses, supplemented by three sections within the major support courses: 9 credits focused on specialization, 6 credits dedicated to major support (computer applications and employee safety), and 12 credits in management electives. The content needed for the 18 credit hours of core FFM major courses currently resides within the Department of Grain Science and Industry at Kansas State University. This content will be retooled for online delivery and to focus on the key pieces of technical education needed for this target audience.

Recognizing the importance of business operations and management skills, we require students to complete 12 credits in "Management Electives." Additionally, effective communication and applied mathematics are critical skills sought by employers, leading to requirements in the KBOR general education curriculum, including courses in English, Communication, and Math.

The remaining credits consist of 4-5 credits in Natural Science and Physical Sciences and 3 credits in Arts and Humanities or Social and Behavioral Science, providing a well-rounded education. These courses lay a solid foundation in basic science and the humanities while allowing students to explore a wide range of topics that can significantly influence their career trajectories.

In addition to the AAS FFM degree, FFM certificates will be in place by Fall 2025. These certificates are designed to provide students with a credential they can present to employers even before completing their associate's degree. This is particularly valuable for students who may need to pause their education or want to demonstrate their skills to prospective employers partway through their studies. Additionally, all course requirements for the certificate will apply directly toward the completion of the Associate of Applied Science (AAS) degree. Offering these certificates, along with free high school courses through Excel in CTE (formerly SB155) and Career Clusters and Pathway: Ag Technology and Mechanical Systems (proposed to be transferable to K-State as 3 credits of AGTEC 111), strengthens the stackable credential pathway (see Appendix II), recognized by the Kansas Board of Regents (KBOR), helping students build their academic and professional profiles step-by-step. For the non-traditional place-bound student, we also hope to develop microcredentials in the future that will not only enhance skills in their current position through professional development, but that will also provide a pathway of stackable credentials (see Appendix III) that could lead to a certificate or ultimately an associate’s degree.

Year 1: Fall **SCH = Semester Credit Hours**

Course #	Course Name	SCH
CORE 1	K-State CORE 1 – English - Select 1 course from the list (i.e. ENGL 100 - Expository Writing I)	3
CORE 3	K-State CORE 3 - Mathematics & Statistics - Select 1 course from the list (i.e. STAT 225 - Intro to Statistics)	3
ASMS 120	Intro to Food & Feed Manufacturing Employee Safety	1
ASMS 220	Employee Safety in Grain Handling Facilities	1
ASMS 221*	Safety Applications Practicum	1
FFM 101	Orientation to Food & Feed Manufacturing	1
FFM 110	Intro to Grain & Food Manufacturing Industries	1

FFM 111	Intro to Feed & Pet Food Manufacturing Industries	1
FFM 120	Ingredient ID & Quality: Cereal Grains	1
FFM 121	Ingredient ID & Quality: Oil Seeds & Legumes	1
FFM 122	Ingredient ID & Quality: Co-products & Additives	1
Select 1 course:		
FFM 159*/169*/179*	Practicum: Intro to Milling/Intro to Baking/Intro to Feed & Pet Food	1

Year 1: Spring

Course #	Course Name	SCH
CORE 2	K-State CORE 2 - Communication - Select 1 course from the list (i.e. COMM 106 - Public Speaking I)	3
CORE 5 or CORE 6	K-State CORE 5 - Social & Behavioral Science *or* K-State CORE 6 - Arts & Humanities - Select 1 course from the list	3
CA Elective	Computer Applications Elective - ASI 290 or CIS	1-3
Select 1 group:		3
FFM 150/151/152	Milling: Preparing Grains/Milling Process/Milling Specialty Grains	
FFM 160/161/162	Baking: Bakery Ingredients/ Bakery Processes/Baking Products	
FFM 170/171/172	Feed & Pet Food: Feed Processing/Pet Food Processing/ Finished Feed and Pet Food Quality Assurance	
Specialization Elective Course	See Departmental List**	3

Year 2: Fall

Course #	Course Name	SCH
CORE 4	K-State CORE 4 - Natural & Physical Sciences - Select 1 course, with lab, from the list (i.e. AGRON 120 & 121, Crop Science)	4
LEAD 212 *or* MANGT 220	Introduction to Leadership Concepts or Principles of Management	3
FFM 210	Food & Feed Manufacturing Equipment Maintenance	1
Select 1 course:		
FFM 215/216/217	Maintenance Programs: Milling Specific/Baking Specific /Feed & Pet Food Specific	1
Select 1 course:		
FFM 225*/226*/227*	Equipment Maintenance Practicum: Milling/Baking/Feed	1
Specialization Elective Course	See Departmental List**	3
Management Elective Course	See Departmental List**	3

Year 2: Spring

Course #	Course Name	SCH
FFM 250	Advanced Food & Feed Manufacturing Management	1
Select 1 course:		
FFM 251/261/271	Advanced Management: Milling/Baking/Feed & Pet Food	1
Select 1 course:		
FFM 252*/262*/272*	Advanced Manufacturing Management Practicum: Milling/Baking/Feed & Pet Food	1

FFM 280	Intro to Food & Feed Safety	1
Select 1 course:		
FFM 285/287	Food Safety Principles in Milling and Baking/Advanced Feed & Pet Food Safety	1
Specialization Elective Course	See Departmental List**	3
Management Elective Course	See Departmental List**	3
Management Elective Course	See Departmental List**	3
Free Electives	If needed to reach 60 total hours	0-2

Total Number of Semester Credit Hours 60

**** Departmental List:**

Management Electives:		**12**
Select 1 Course:		
LEAD 212	Intro to Leadership Concepts	3
MANGT 220	Principles of Management	3
Select 9 Hours:		
ACCTG AGEC BUS ENTRP FINAN LEAD MANGT MIS MKTG SALES		
Specialization Electives:		**9**
Select 9 Hours:		
AGRON AGTEC ASI ASMS ATM ECET ENTOM FDSCI FFM FNDH GRSC IMSE MET		

VIII. Core Faculty

Note: *** Next to Faculty Name Denotes Director of the Program, if applicable
FTE: 1.0 FTE = Full-Time Equivalency Devoted to Program

Faculty Name	Rank	Highest Degree	Tenure Track Y/N	Academic Area of Specialization	FTE to Proposed Program
Dr. Chad Paulk***	Associate Professor	PhD	Y	Feed Science, Monogastric Nutrition, Ingredient Quality and Safety	0.17
New Program Coordinator	Instructor	TBD	N	Online Course Delivery	1.0
Jason Watt	Instructor	BS	N	9 yrs experience in milling education; 7 yrs practical milling industry experience	0.17
Aaron Clanton	Instructor	MBA	N	5 yrs experience teaching at K-State; 20 yrs experience - bakery industry; 13 yrs experience teaching all aspects of AIB Internationals baking curriculum.	0.04
Fran Churchill	Instructor	MS	N	12 yrs experience milling education; 20 yrs practical milling industry experience	0.13

Huseyin Dogan	Instructor	BS	N	Associate Engineer, 21 yrs experience teaching for Department of Grain Science. Mechanical Engineer - 30 yrs experience - project management, design, power distribution, & trouble shooting.	0.08
Dr. Julia Pezzali	Assistant Professor	PhD	Y	Pet Food Processing, Pet Food Nutrition	0.04
Paul Blodget	Instructor/Flour Mill Manager	BS	N	Current Instructor and Program Manager - Hal Ross Flour Mill. Over 20 yrs practical milling experience	0.21
Dr. Mitch Ricketts	Professor	PhD	Y	Agriculture Safety & Health; Board Certified Safety Professional - over 30 yrs experience in safety, health, & environmental management	0.10
Bakery Science Faculty	TBD	TBD	Y/N	A core Bakery Science Faculty member will have FTE repartitioned to account for this additional teaching responsibility.	0.29
Feed Science Faculty	TBD	PhD	Y	A core Feed Science Faculty member will have FTE repartitioned to account for this additional teaching responsibility.	0.21
Pet Food Science Faculty	TBD	PhD	Y	A core Pet Food Science Faculty member will have FTE repartitioned to account for this additional teaching responsibility	0.08

Number of graduate assistants assigned to this program **0**

IX. Expenditure and Funding Sources

A. EXPENDITURES	First FY	Second FY	Third FY
Personnel – Reassigned or Existing Positions			
Faculty	$104,000		
Administrators *(other than instruction time)*		$65,000	$65,000
Graduate Assistants			
Support Staff for Administration (*e.g., secretarial*)			
Fringe Benefits *(total for all groups)*		$21,450	$21,450
Other Personnel Costs			
Total Existing Personnel Costs – Reassigned or Existing	$104,000	$86,450	$86,450
Personnel – New Positions			
Faculty			
Administrators *(other than instruction time)*	$65,000		
Graduate Assistants			
Support Staff for Administration (*e.g., secretarial*)			
Fringe Benefits *(total for all groups)*	$21,450		

Other Personnel Costs			
Total Existing Personnel Costs – New Positions	$86,450		
Start-up Costs - One-Time Expenses			
Library/learning resources			
Equipment/Technology			
Physical Facilities: Construction or Renovation			
Other			
Total Start-up Costs			
Operating Costs – Recurring Expenses			
Supplies/Expenses	$12,500	$12,500	$12,500
Library/learning resources			
Equipment/Technology			
Travel			
Other	$103,700	$103,700	$103,700
Total Operating Costs	$116,200	$116,200	$116,200
GRAND TOTAL COSTS	$306,650	$202,650	$202,650

B. FUNDING SOURCES *(projected as appropriate)*	Current	First FY (New)	Second FY (New)	Third FY (New)
Tuition / State Funds		$109,291	$194,294	$309,657
Student Fees				
Other Sources				
GRAND TOTAL FUNDING		$109,291	$194,294	$309,657
C. Projected Surplus/Deficit (+/-) (Grand Total Funding *minus* Grand Total Costs)		- $197,359	- $8,356	$107, 007

X. Expenditures and Funding Sources Explanations

A. Expenditures

Personnel – Reassigned or Existing Positions

The Department of Grain Science and Industry has 10 faculty with various extension and teaching responsibilities that adequately cover the diverse discipline. Therefore, all FFM course offerings are offered as part of current appointments. Percent time dedication varies with faculty member roles and ranges from 0.08 to 0.29 FTE.

- The First FY expense for $104,000 will be designated to cover the summer salary of 3 tenured track professors who are on 9-month appointments for course development. These will be a one-time expense.
- A total of 3 tenured track professors and 5 instructors will be reassigned to AAS FFM courses. With addition of the new workload policy at Kansas State University, there are gaps in teaching load responsibilities for these faculty that can be used to meet the AAS teaching needs. In addition, current

online service courses, such as GRSC 101, will be removed and restructured as FFM 110, 111, 120, 121, 122.

Personnel – New Positions
One Program Coordinator will be hired as an administrator and content manager for the AAS in Food and Feed Manufacturing. The annual salary for the Program Coordinator will be $65,000. Fringe benefit of $21,450 were calculated at the standard university rate of 30%.

Start-up Costs – One-Time Expenses
As previously defined, the one-time expense will be related to personnel. A total of 3 tenured track professors and 5 instructors will be reassigned to AAS courses. With addition of the new workload policy at Kansas State University, there are gaps in teaching load responsibilities for these faculty that can be used to meet the AAS teaching needs. In addition, current online service courses, such as GRSC 101, will be removed and restructured as FFM 110, 111, 120, 121, 122.

Operating Costs – Recurring Expenses
We also require funds for supplies/expenses associated with office materials, instruction, IT support, and promotion and marketing activities ($12,500/yr). In addition, we will offer 10 practicum courses and this will require operation of the flour mill, baking lab, test kitchens, feed mill, and pet food processing labs. For each of these courses it will cost approximately $10,000 in operations and supplies (total $103,700 per year).

B. Revenue: Funding Sources

Student tuition revenue has been calculated at $404.78/credit hour – the standard in-state tuition rate for undergraduate courses. The total number of credit hours per year is based on the projected enrollment and anticipated credit hours for full-time and part-time students.

Fiscal year	Total credit hours	Cost per credit hour	Total revenue
First FY	270	$404.78	$109,291
Second FY	480	$404.78	$194,294
Third FY	765	$404.78	$309,657

C. Projected Surplus/Deficit

The projected surplus by year three reflects the difference between Total Funding and Total Expenses.

XI. References

U.S. Bureau of Labor Statistics. (n.d.) *Quarterly census of employment and wages*. Available from https://www.bls.gov/cew/

U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS) (2022). Available from https://nces.ed.gov/ipeds/datacenter.

Appendix I

Dr. Kyle Coble
Director of Nutritional Services
JBS Live Pork, LLC
Greeley, CO

August 18th, 2024

Associate of Applied Sciences (AAS) in Food and Feed Manufacturing
Kansas State University
Manhattan, KS

Dear Department and Faculty Member(s):

I am writing this letter in support of your proposed development of the academic program and curriculum for an Associates Degree of Applied Sciences (AAS) in Food and Feed Manufacturing. This extended learning opportunity for many in our industry is needed, desired, and essential to the continuation of adding skilled labor to the feed manufacturing workforce.

Nearly 4 years ago, Dr. Chad Paulk, Dr. Charles Stark, and I develop the "JBS Master Milling Course". It covers the areas of basic feed milling, quality control, maintenance and even some personal development in feed milling. This was developed out of necessity to create growth opportunities for our front-line workers who were thirsty for a chance to move up in the business and for a better future that would accompany them for their lives beyond.

This reality of need unfortunately came full force before the program was developed. Just weeks prior to moving this concept into a reality, an employee of mine whom had been at the company for 42 years at the same mill, even after building it, said "my father told me all I would ever be was a feed mill operator and that was all I ever was. No one ever cared enough to develop me or help me fulfill my potential in an industry I loved". While this person was proud of their tenure, they were not happy with the outcome of their career – it had become a job they did for decades. Only having overseen the Feed Operations for JBS Live Pork for less than a year and our company only owning that location for slightly longer, it shook me to the core. From that point forward, I vowed to never put our employees in that position and born was the JBS Master Milling Course.

The course overall has been a success, but it has not been without its challenges. While post graduate trained and completing a PhD, I am not a trained educator and at times the development has struggled to keep pace. The demands of an industry job tug at time and priorities to keep the business going versus personal development is a reality. Students need prompt replies and consistent engagement. When we have had up to 25 students across 3 classes at one time, they need a professional that is an educator in the area of milling science and a program whose focus and core is exactly what this AAS would provide. To top this all, even after a monetary bonus was provided for class completions, most did not want to do "without getting a college degree".

Selfishly, I cannot explain in words what this would mean to JBS Live Pork's Feed Milling Team. It would expand our established program into an option that students and industry professionals could carry on with and add academic merit to their futures that allow them to turn a job into a career. This program would be one of a kind in our industry, and no one is better at that than Kansas State Grain Science.

I thank you for reading this letter and hearing our position as you deeply consider the futures and careers of not only our employees, but the industry and families they are made of.

Sincerely,
Kyle Coble
Dr. Kyle Coble

1770 Promontory Circle · Greeley, CO 80634 · 970-506-8000 · jbsfoodsgroup.com

November 1, 2024

Faculty and Administration
Kansas State University
Manhattan, KS 66506

RE: Support for the Associate of Applied Sciences (AAS) in Food and Feed Manufacturing

Dear Faculty and Administration,

We are writing to express our strong support for the proposed development of the Associate of Applied Science (AAS) in Food and Feed Manufacturing curriculum at Kansas State University. This initiative will provide opportunities for potential students looking to enter the grain milling industry as a future career.

As both the food and feed manufacturing sectors continue to grow, a significant need has emerged for professionals adept in both technical and operational sides of running a mill. The AAS program aligns with this demand and provides instruction and experience in grain milling, preparing a pool of skilled employees ready to contribute effectively early in their careers.

Hill's Pet Nutrition acknowledges the potential this program holds. By offering this targeted training, current and future employees will be able to bring expertise to mills throughout Kansas, reflective of the state's position as a grain production leader.

Furthermore, the program supports local economies by sustaining the long-term viability of Kansas-based grain mills and other related food and feed manufacturing businesses. It provides students with pathways to gain education and hands-on experience, retaining talent within the state and providing a continuous pipeline of skilled workers.

Thank you for your consideration of this addition to Kansas State University's educational offerings. We eagerly anticipate the success of the AAS in Food and Feed Manufacturing program and are confident in the substantial impact it will have on the industry.

Sincerely,

Nicholas L. Rozzi, Ph.D.
Vice President, Product Development
Hill's Pet Nutrition
1035 NE 43rd Street
Topeka KS 66617

Dr. Chad Paulk
Associate Professor
Feed Science and Management in the Department of Grain Science and Industry
Kansas State University
Shellenberger 313
Manhattan KS, 66506

Proposed AAS in Food and Feed Manufacturing Program

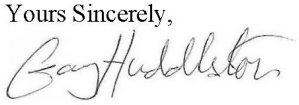
Dear Dr. Paulk,

Founded in 1909, the American Feed Industry Association (AFIA), based in Arlington, Va., is the world's largest organization devoted exclusively to representing the business, legislative and regulatory interests of the U.S. animal food industry and its suppliers. The organization's membership is comprised of over 650 domestic and international companies that represent the total feed industry—manufacturers of commercial and integrated feed and pet food, ingredient suppliers, pharmaceutical companies, industry support and equipment manufacturers. AFIA's members manufacture more than 75% of the feed and 70% of the non-whole grain ingredients used in the country.

The AFIA was thrilled to hear that you are proposing to develop an Associate of Applied Sciences (AAS) in Food and Feed Manufacturing. An AAS degree in feed manufacturing will help meet some current needs in our industry labor requirements. There are existing industry professionals seeking to earn a degree online while maintaining their current employment. This type of program will help those individuals increase their knowledge base and advance their careers. There are also students that would like to complete a two-year technical degree and enter the workforce quickly rather than pursue a traditional four-year degree. The type of degree program that you are proposing to develop will help provide highly qualified potential employees to work in our feed manufacturing facilities. A more educated employee always equates to a more qualified employee. A more qualified labor force is good for our industry.

The AFIA whole-heartedly supports the development of this program!

Yours Sincerely,



Gary Huddleston
Director of Feed Manufacturing and Regulatory Affair

Our Industry. Our Passion. Our Voice.

American Feed Industry Association • 2101 Wilson Blvd., Suite 810, Arlington VA 22201 USA
T: (703) 524-0810 • F: (703) 524-1921 • afia@afia.org • afia.org

NORTH AMERICAN MILLERS' ASSOCIATION

The Link Between Grain and Goodness

August 30, 2024

Department of Grain Science and Industry
Kansas State University
Suite 201 Shellenberger Hall
1301 Mid-Campus Dr
Manhattan, KS 66506

Dear Department of Grains Science and Industry:

I am writing on behalf of the North American Millers' Association (NAMA) in support of the Kansas State University Department of Grain Science and Industry application to offer an Associate of Applied Science (AAS) in Food and Feed Manufacturing

NAMA represents millers of wheat, corn, oats, and rye across the continental United States, Puerto Rico, and Canada. Our members take raw grain and, through grinding and crushing, create flour and other products that are used to make favorite foods.

Kansas State University currently offers the only Bachelor of Science degree in milling in the United States. Our industry fully supports the current program, but we also recognize that the needs of today's learners and employers are broader than four-year degree programs.

As the only fully operational training center in the United States, Kansas State has a unique opportunity to utilize existing resources and staff to expand its mission and enrollment. Our hope is that currently working employees will be able to advance their careers by earning an AAS degree while working full-time. The program would also offer students from Kansas and around the country specialized training for jobs with excellent compensation and professional growth opportunities.

The milling industry, like other manufacturers located in rural America, must look at new ways to expand our talent pipeline. An AAS in Food and Feed Manufacturing offered by Kansas State could play an important role in workforce development for the future.

Sincerely,

Jane DeMarchi
President

1400 Crystal Drive, Suite 650 · Arlington, VA 22202

TEL: 202.484.2200 · namamillers.org · generalinfo@namamillers.org

Cargill Helping the world thrive

October 4, 2024

Chad Paulk
Associate Professor, Department of Grain Science and Industry
Kansas State University

Dr. Paulk,

We appreciate the chance to express our support for the proposed Associate of Applied Science in Food and Feed Manufacturing (AAS). At Cargill, our values--do the right thing, put people first and reach higher--guide us in all aspects of our business. These values guide how we attract and retain the talent that we employ in our production facilities. We believe that it is in the best interest of our current and future team members to have access to a wide variety of educational opportunities. As we look at our talent in our food and feed production facilities, we recognize that not every supervisory and management position would require a traditional four-year degree. We do still value the investment that our team members make in their education and will continue to seek out employees with four-year degrees. At the same time, we also recognize the importance of education options that fit the life circumstances of our employees who do not wish or are not able to invest in a four-year degree.

The AAS program that you are proposing will be a valuable addition to the education options of our current and future employees. We could certainly see this as a degree track that would help us to meet the demands for entry level supervisory employees in our production facilities. We also appreciate the fact that this could be a great option for some of our current employees to further their education as they continue their employment. We appreciate the work that you and your department have done to propose this AAS program. Cargill is supportive of the development of such programs, and they will help to improve the ability of our team members to prepare for future roles and to grow in existing roles at Cargill.

Thank you for consideration of these comments and please let us know if you need anything else to support your efforts.

My Regards,

Scott J. Eilert

Scott J. Eilert, Ph.D.
VP, Responsible Sourcing Program Director
Cargill Protein and Salt

825 E. Douglas *Wichita, KS 67202* *316-291-2119*

Josh Flohr, Ph.D.

To the Department of Grain Science and Industry,

Seaboard Foods is a leading integrated food company in the United States, producing premium pork and other protein products for domestic and international markets. With our deep roots in the Midwest, particularly in Kansas, where many of our operations are based, we are committed to fostering strong relationships within the state. Our facilities in Kansas play a vital role in our supply chain, making it one of our key production hubs.

We are pleased to hear about your proposal to develop an Associate of Applied Sciences (AAS) in Food and Feed Manufacturing. This AAS degree will help address the current labor market needs in our industry, particularly by providing targeted education and hands-on training for students who are eager to join the workforce. Many individuals in the industry are seeking opportunities to advance their careers by enhancing their knowledge while continuing their employment. This program would be an excellent resource for such professionals to upskill and contribute even more effectively to their organizations.

Additionally, as a company with strong ties to Kansas, this program is especially valuable to us. By creating opportunities for Kansas students and professionals to receive technical education close to home, the program will help sustain a robust local labor force that can support the continued growth of the state's food and feed manufacturing industries. Furthermore, this program offers a valuable pathway for students aiming to quickly enter the workforce with a two-year technical degree. The skills and qualifications gained through this degree will prepare them to succeed in various roles within the feed manufacturing sector, ensuring that we have access to well-trained and educated employees ready to thrive in our Kansas facilities.

Seaboard Foods fully supports the development of this program. A better-educated workforce will directly benefit both our company and the broader Kansas economy. We are confident that this initiative will enhance the availability of qualified employees and contribute to the overall success of food and feed manufacturing operations across the country and within our state.

Sincerely,

Josh Flohr

Senior Director of Technical and Veterinary Services

Seaboard Foods

WAYNE SANDERSON FARMS
TOGETHER, WE MAKE CHICKEN AMAZING

August 29, 2024

To whom it may concern:

This letter is written in support of the proposed Associate of Applied Sciences in Food and Feed Manufacturing at Kansas State University. This proposed program offers the potential to positively impact and influence livestock, grain and feed manufacturing industries.

There is a large void in our industry of professionals that already possess technical skills and knowledge of grain and feed manufacturing. Therefore, it's difficult to easily find and place supervisory or managerial roles in mills. This program offers a great opportunity to offer additional training to current employees, as well as greater pool of talent in our industries.

I fully support the proposed program and the potential impact it will have.

Thanks,

Chance Williams, PhD
Senior Nutritional Services Director
Wayne-Sanderson Farms

4110 Continental Drive, Oakwood, Georgia 30566 | 800.392.0844 | waynesandersonfarms.com

Ardent Mills

August 26, 2024

Kansas Board of Regents
1000 SW Jackson Street, Suite 520
Topeka, KS 66612

Dear Members of the Kansas Board of Regents,

I am writing to express Ardent Mills' enthusiastic support for the proposed Associate of Applied Science (AAS) in Food and Feed Manufacturing program being proposed by the Department of Grain Science at Kansas State University. As a leading flour milling company with a long-standing commitment to the state of Kansas, we recognize the significant benefits that this program will bring to both the local workforce and the industry as a whole.

Kansas has a storied history in flour milling and agriculture, and it is imperative that we continue to nurture and develop this vital sector. The AAS in Food and Feed Manufacturing aligns perfectly with the needs of our industry and the opportunities available to Kansas students. This program will serve as a critical bridge between education and industry, addressing the growing demand for skilled professionals in the food and feed manufacturing sector.

The benefits of this program are manifold:

1. **Enhancing Workforce Skills:** The AAS program will provide current and future employees with specialized training that is directly applicable to their roles within the industry. By equipping them with advanced knowledge and practical skills, the program ensures that our workforce remains competitive and adept in a rapidly evolving field.

2. **Fulfilling Industry Needs:** As the food and feed manufacturing sector continues to grow, there is an increasing need for trained professionals who understand both the technical and operational aspects of the industry. This program will help fill that need by developing a pool of highly qualified candidates ready to contribute effectively from day one.

3. **Supporting Local Economies:** By fostering a skilled workforce, the AAS program will support the long-term viability of Kansas flour mills and other food and feed manufacturing businesses. This not only helps our company but also strengthens the overall economic health of the state.

4. **Creating Pathways for Students:** The program offers a valuable opportunity for Kansas students to gain relevant education and hands-on experience, which can lead to rewarding careers within the state. By providing a clear pathway from education to employment, the

program will help retain talent within Kansas and ensure a steady pipeline of skilled workers for the future.

At Ardent Mills, we are committed to supporting educational initiatives that align with our industry's needs and contribute to the growth of the local economy. We believe that the AAS in Food and Feed Manufacturing is a significant step forward in achieving these goals and are proud to lend our support to this initiative.

Thank you for considering this valuable addition to the educational landscape of Kansas. We are confident that the program will make a lasting impact and look forward to witnessing its success.

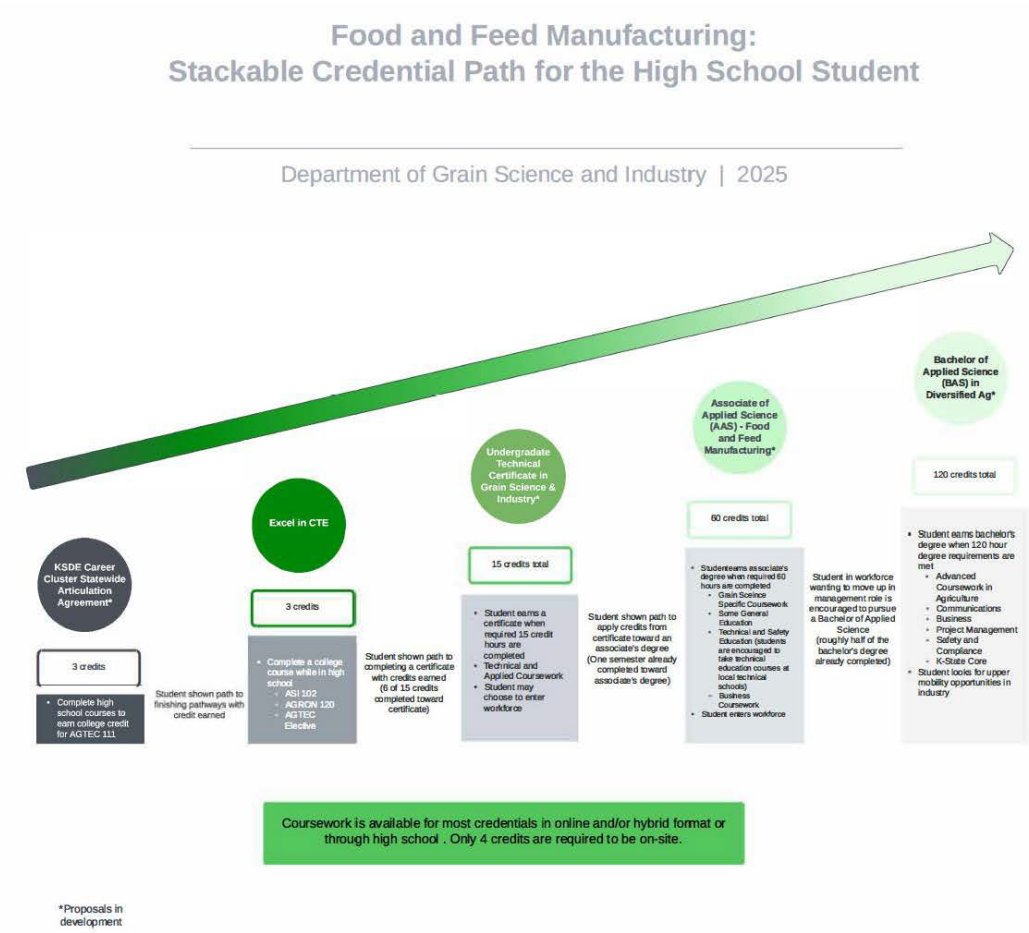
Sincerely,

Troy Anderson
Vice President | *Operations*
Cell: 316-200-2041

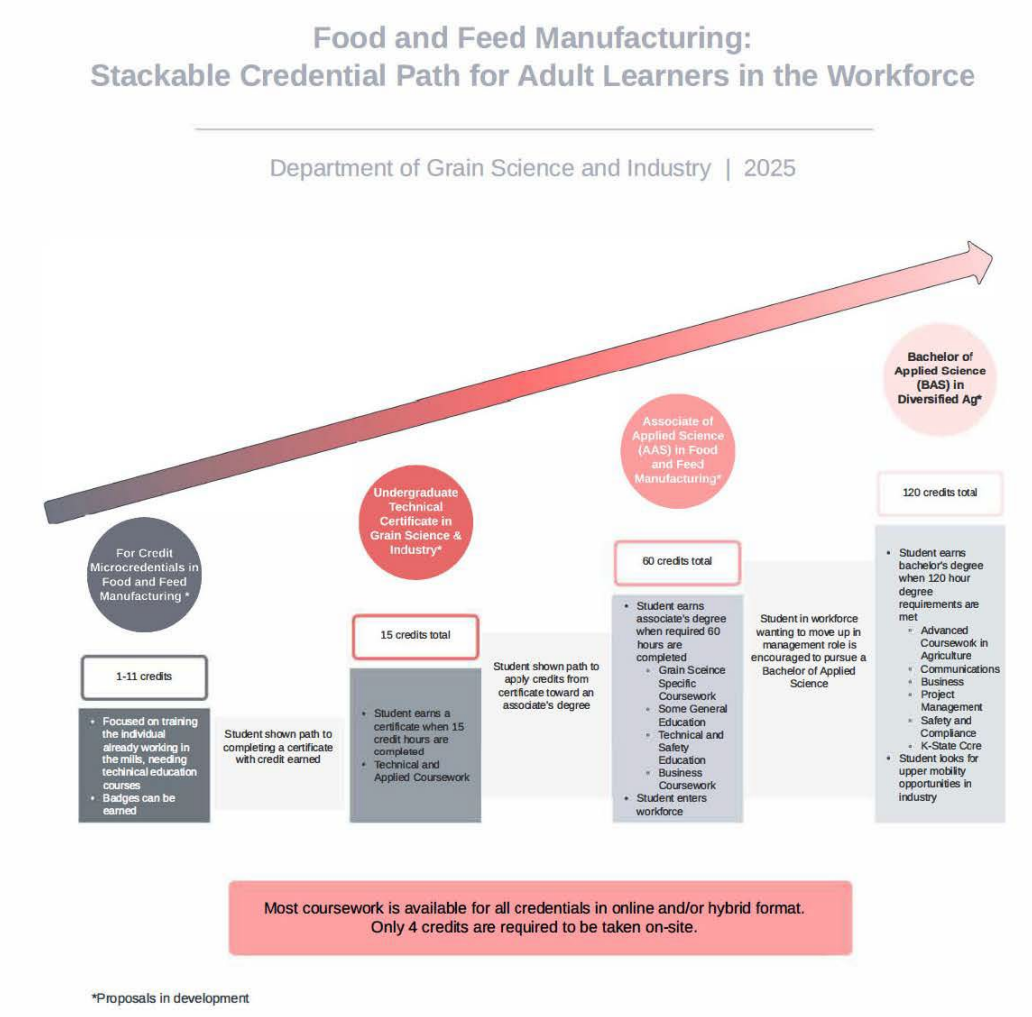
ardentmills.com

Ardent Mills
Nourishing what's next

Appendix II:


Food and Feed Manufacturing:
Stackable Credential Path for the High School Student
Department of Grain Science and Industry | 2025
KSDE Career Cluster Statewide Articulation Agreement*
3 credits
Complete high school courses to earn college credit for AGTEC 111
Student shown path to finishing pathways with credit earned
Excel in CTE
3 credits
Complete a college course while in high school
ASI 102
AGRON 120
AGTEC Elective
Student shown path to completing a certificate with credits earned (6 of 15 credits completed toward certificate)
Undergradate Technical Certificate in Grain Science & Industry*
15 credits total
Student earns a certificate when required 15 credit hours are completed
Technical and Applied Coursework
Student may choose to enter workforce
Student shown path to apply credits from certificate toward an associate's degree (One semester already completed toward associate's degree)
Associate of Applied Science (AAS) - Food and Feed Manufacturing*
60 credits total
Studentearns associate's degree when required 60 hours are completed
Grain Science Specific Coursework
Some General Education
Technical and Safety Education (students are encouraged to take technical education courses at local technical schools)
Business Coursework
Student enters workforce
Student in workforce wanting to move up in management role is encouraged to pursue a Bachelor of Applied Science (roughly half of the bachelor's degree already completed)
Bachelor of Applied Science (BAS) in Diversified Ag*
120 credits total
Student earns bachelor's degree when 120 hour degree requirements are met
Advanced Coursework in Agriculture
Communications
Business
Project Management
Safety and Compliance
K-State Core
Student looks for upper mobility opportunities in industry
Coursework is available for most credentials in online and/or hybrid format or through high school . Only 4 credits are required to be on-site.
*Proposals in development

Appendix III:



KANSAS STATE UNIVERSITY

Complete as of 9/16/2024

Degree: Associate of Applied Science
Major: Food and Feed Manufacturing

Distinctive Requirements for Degree Program
To Declare Major:

To Prepare for First Semester:

First Year

SEMESTER 1		Critical	Recommended	Kansas State Core	CREDITS
Requirement #1 English	Select 1 course from the list (i.e. ENGL 100 - Expository Writing I)			010	3
Requirement #3 Mathematics & Statistics	Select 1 course from the list (i.e. STAT 225 - Intro to Statistics)			030	3
ASMS 120	Intro to Food & Feed Manufacturing Employee Safety				1
ASMS 220	Employee Safety in Grain Handling Facilities				1
ASMS 221*	Safety Applications				1
FFM 100	Orientation to Food & Feed Manufacturing				1
FFM 110	Intro to Grain & Food Manufacturing Industries				1
FFM 111	Intro to Feed & Pet Food Manufacturing Industries				1
FFM 120	Ingredient ID & Quality: Cereal Grains				1
FFM 121	Ingredient ID & Quality: Oil Seeds & Legumes				1
FFM 122	Ingredient ID & Quality: Co-products & Additives				1
Select 1 course:					
FFM 159*/169*/179*	Practicum: Intro to Milling/Intro to Baking/Intro to Feed & Pet Food				1
	Total Credits				**16**

SEMESTER 2		Critical	Recommended	Kansas State Core	CREDITS
Requirement #2 Communication	Select 1 course from the list (i.e. COMM 106 - Public Speaking I)			020	3
Requirement #5 Social & Behavioral Science or #6 Arts & Humanities	Select 1 course from the list			050 or 060	3
Computer Applications Course	Select 1 course: AS1290 or CIS				1-3
Select 1 group:					3
FFM 150/151/152	Milling: Preparing Grains/Milling Process/Milling Specialty Grains				
FFM 160/161/162	Baking: Bakery Ingredients/Bakery Processes/Bakery Products				
FFM 170/171/172	Feed & Pet Food: Feed Processing/Pet Food Processing/Finished Feed & Pet Food Quality Assurance				
Specialization Elective Course	See Departmental List				3
	Total Credits				**13-15**

Second Year

SEMESTER 1		Critical	Recommended	Kansas State Core	CREDITS
Requirement #4 Natural & Physical Sciences	Select 1 course from the list (i.e. AGRON 120 & 121, Crop Science)			040	4
LEAD 212 or MANGT 220	Introduction to Leadership Concepts or Principles of Management				3
FFM 210	Food & Feed Manufacturing Equipment Maintenance				1
Select 1 course:					
FFM 215/216/217	Preventative & Predictive Maintenance: Milling Specific/Baking Specific/Feed & Pet Food Specific				1
Select 1 course:					
FFM 225*/226*/227*	Equipment Maintenance Practicum: Milling/Baking/Feed & Pet Food				1
Specialization Elective Course	See Departmental List				3
Management Elective Course	See Departmental List				3
					16

SEMESTER 2		Critical	Recommended	Kansas State Core	
FFM 250	Advanced Food & Feed Manufacturing Management				1
Select 1 course:					
FFM 251*/261*/271*	Advanced Management: Milling/Baking/Feed & Pet Food				1
Select 1 course:					
FFM 252/262/272	Advanced Manufacturing Management Practicum: Milling/Baking/Feed & Pet Food				1
FFM 280	Intro to Food & Feed Safety				1
Select 1 course:					
FFM 285/287	Food Safety Principles in Milling and Baking/Advanced Feed & Pet Food Safety				1
Specialization Elective Course	See Departmental List				3
Management Elective Course	See Departmental List				3
Management Elective Course	See Departmental List				3
Free Elective	If needed to reach 60 total hours				0-2
	Total Credits				**14-16**
	Program Total Credits:				**60**

*On-Site Course

Appendix IV

KANSAS ASSOCIATION OF
COMMUNITY COLLEGES

April 14, 2025

Dr. Blake Flanders
President and CEO
Kansas Board of Regents

Dear Dr. Flanders,

The 19 Kansas community colleges are grateful for the opportunity to share our thoughts regarding Kansas State University's (K-State) proposal to offer an Associate of Applied Science (AAS) degree in Food and Feed Manufacturing. For decades, awarding Associate Degrees has been the purview of Kansas community colleges. This proposal is different from the last few proposals for Associates degrees in that this degree is not intended to be a transfer degree. It is an AAS, which will generally not transfer, and be applicable to a Bachelor's degree. The community and technical college's mission is squarely in the area that K-State is trying to stray into. The community colleges would be happy to explore adding this program if demand exists at both the local and state level, as is required by KBOR program proposals (KBOR Policy Manual p. 25). While letters of support were submitted for this proposal, most of the letters had a common theme which could be described as stating that the company was pleased to hear about the program. There was no strong mention anywhere in any letter that there was a demand for an AAS degree, no numbers of employees that would be hired, and many of the letters were from out-of-state companies.

Community colleges became aware of K-State's effort to bring this program forward about a year ago. Immediately, Executive Director Heather Morgan reached out to K-State for a conversation and expressed concern that K-State would advance this proposal without discussing how to partner with community colleges prior to advancing this program. That conversation happened with Executive Vice President Marshall Stewart who connected her with an Assistant Dean of Agriculture. At that time, the Assistant Dean at K-State expressed that there was industry demand, that they were open to partnerships, and that they would initiate further discussions as the program developed and prior to going to the faculty senate for approval. **However, after this conversation there was no further communication.** During the initial conversation with K-State significant industry demand was stated repeatedly as the reason they wanted to start this program. However, during the period after our conversation, in which more "industry feedback" was being sought by K-State, community colleges noted that feedback for this program was sought through a post on LinkedIn. They also noticed that the feedback was being solicited through a survey that was open to anyone for a response. If robust industry demand had already been obtained, as was stated in preliminary discussions, this would be an unusual practice and certainly not a disciplined survey approach

required by KBOR policy. This type of industry feedback is not the formal process most programs go through, nor is it accepted for any AAS degree that would be approved through the Technical Education Authority (TEA) and KBOR for a community or technical college AAS degree. Additionally, the Technical Education Authority requires actual letters of support stating how the company will hire, interview, or work with graduates, and the colleges must also reach out to collaborate with other colleges prior to bringing the program forward. In this case, it appears that none of this occurred.

The community colleges unanimously oppose this program and are disappointed collaboration from K-State did not come to fruition. This situation will impact the trust between the colleges and K-State in future potential partnerships. Multiple community colleges have programs or courses similar to what is being proposed. Most community colleges could deliver many of the courses outlined in the proposal submitted to KBOR. Community colleges who have similar programs or were in areas where this may be of demand in the state expressed a desire and willingness to develop additional courses and work in partnership with K-State on any 200-level specialty courses needed where K-State believes they have specific expertise.

In closing, from a community college perspective, we believe it is important for colleges to seek collaborations and efficiencies in areas that allow students access to the knowledge needed to advance their careers in the least expensive and most accessible formats possible. K-State should not be allowed to enter the AAS space but should be encouraged to partner with community colleges to offer an AAS in this area if industry demand exists. We stand ready to partner and hope that this situation serves as an example for future new programs that collaboration is required rather than just creating new programs when existing resources could be deployed to meet the students' needs in specific content areas.

Sincerely, on behalf of Kansas Community College Presidents and Trustees,

Heather Morgan

Heather Morgan, Executive Director
Kansas Association of Community Colleges

Seth Macon Carter

Seth Macon Carter, Ed.D., President
Colby Community College

Appendix V

KANSAS STATE UNIVERSITY | Office of the Provost and Executive Vice President

May 4, 2025

Dr. Blake Flanders
President and CEO
Kansas Board of Regents

Dear Dr. Flanders,

Kansas State University offers the following response to the letter from Heather Morgan and Dr. Seth Macon Carter on behalf of the Kansas Association of Community Colleges, dated April 14, 2025.

The new Associate of Applied Science in Feed and Food Manufacturing developed by K-State was a direct response to a request from the Feed Manufacturing industry. K-State is one of only a few universities nationally with teaching and research programs in milling and feed and pet food manufacturing. While we are striving to increase the number of Bachelor of Science graduates in Milling Science and Management and Feed and Pet Food Science, the industry has also asked that we develop an associate's degree to meet their needs for additional highly skilled employees with specific training in feed milling. Some companies have indicated they intend to immediately enroll some of their current employees at company expense.

The College of Agriculture has no interest in developing associate's degree programs that duplicate existing offerings, or that Kansas community colleges could develop. K-State is uniquely positioned to offer the proposed associate's degree because of our unique infrastructure and human capital in this area.

For example, our Bioprocessing and Industrial Value-Added Products Innovation Center has unique, commercial-scale equipment such as extruders used in manufacturing of fish diets and pet food. K-State's Hal Ross Flour Mill, completed in 2006 at a cost of $12 million, and O.H. Kruse Feed Technology Innovation Center, completed in 2013 at a cost of $16 million, are unique, commercial-scale teaching and research facilities found nowhere else in the state. In fact, no universities in neighboring states have these types of feed or flour mills, designed specifically for teaching and research.

In addition, K-State's Department of Grain Science and Industry has eighteen faculty with specialized, unique training in all aspects of feed and food manufacturing. No other university in the nation has this capacity and expertise. Our International Grains Program

108 Anderson Hall, Manhattan, KS 66506-0113 | (785) 532-6224 | fax: (785) 532-6507 | k-state.edu/provost

offers short courses in milling and feed processing attended by industry professionals from all over the world, because no other institution has the same capacity for education in this area.

The only other U.S. universities with any capacity to deliver a program such as the one proposed are North Carolina State University, North Dakota State University, and Iowa State University. If the proposed program is not approved, industry stakeholders have indicated they will work with one of those universities to develop a similar associate's degree program. North Carolina State University already offers associate's degrees in agriculture, so they would be the most likely partner. It's worth noting that our facilities and our faculty are funded by the very companies who are requesting this new program. If we can not deliver on their workforce needs, they will likely direct their financial support to universities that can.

Regarding communication, Dr. Dan Moser, Associate Dean in the K-State College of Agriculture, spoke by Zoom about the program with Ms. Morgan in May of 2024. During that visit, Dr. Moser offered to join a meeting of the Kansas Association of Community Colleges, to share information about the program under development. No invitation was extended, but the offer to meet with the group still stands. If community colleges wish to develop equivalent courses to any of those developed for program, we can certainly accept them in the program. However, it's unlikely that the unique faculty or facility needs of those courses will be available at community colleges as they currently are at K-State.

We greatly value our partnership with Kansas community colleges, and in no way want to duplicate their efforts. This is a one-time unique program which leverages existing facilities and expertise to serve an industry which is a significant part of the Kansas economy, and has generously supported K-State.

Sincerely,

Jesse Perez Mendez
Provost and Executive Vice President
Kansas State University

108 Anderson Hall, Manhattan, KS 66506-0113 | (785) 532-6224 | fax (785) 532-6507 | k-state.edu/provost

Program Approval

Summary

Universities may apply for approval of new academic programs following the guidelines in the Kansas Board of Regents Policy Manual. Kansas State University has submitted an application for approval and the proposing academic unit has responded to all of the requirements of the program approval process. Please note, K-State is requesting to require 123 hours for this program.

May 14, 2025

I. General Information

A. Institution Kansas State University

B. Program Identification

Degree Level:	Bachelor's Program
Program Title:	Nuclear Engineering
Degree to be Offered:	Bachelor of Science in Nuclear Engineering
Responsible Department or Unit:	Alan Levin Department of Mechanical and Nuclear Engineering
CIP Code:	14.2301
Modality:	Face-to-Face
Proposed Implementation Date:	Fall 2025

Total Number of Semester Credit Hours for the Degree: 123

II. Clinical Sites: Does this program require the use of Clinical Sites? No.

III. Justification

Kansas State University (KSU) has a rich tradition in the field of nuclear engineering. In 1952, KSU established a nuclear engineering curriculum in the Department of Chemical Engineering, followed in 1958 by the creation of a dedicated Department of Nuclear Engineering. In 1964, KSU's nuclear engineering program was the first in the nation to gain accreditation. Over the next 30 years, KSU graduated many nuclear engineers who went on to become national and world leaders in the field. Due to a nationwide decline in perceived demand for nuclear engineers, KSU joined many other universities in discontinuing its Bachelor of Science (BS) in Nuclear Engineering (NE) program in 1996. However, KSU preserved nuclear engineering education at the undergraduate level by creating the NE Option, a subplan for the BS in Mechanical Engineering (ME) program. The NE Option presently consists of four technical elective courses in the junior and senior years: Radiation Protection and Shielding, Principles of Radiation Detection, Nuclear Reactor Theory, and Nuclear Reactor Laboratory. All students pursuing the BS ME degree are required to take an introductory course in nuclear engineering, and an elective course on nuclear reactor operations is available for students who wish to gain experience with the KSU Research Reactor, a federally licensed non-power reactor facility. **KSU has the only nuclear engineering program at any level in the State of Kansas.**

Demand for the NE Option has increased considerably in recent years, likely driven by availability of generous academic scholarships, student and parent recognition of degree versatility, and employer demand. In the period 2017-2024, an average of 10 students per year graduated after completing the NE Option subplan. An average of 22 students were enrolled each semester in the first course of the NE Option, Radiation Protection and Shielding, with 30 students enrolled in Fall 2024. Estimates based on the number of students who have declared the NE Option indicate a BS NE student body of between 70 and 90 students in AY 2025-2026, with further growth fueled

by dedicated recruiting that is not presently available to the NE Option and increased employer demand as nuclear power takes a more prominent role in the US energy mix.

In response to feedback from the Mechanical and Nuclear Engineering Industrial Advisory Board, input from NE Option graduates, and informal discussions with current students, nuclear engineering faculty explored the possibility of modifying the existing NE Option subplan to produce a KBOR-compliant, ABET-accreditable BS NE program. Minor modifications to the NE Option subplan of the BS ME degree were required, mainly to meet program specific requirements imposed by ABET. In the process, two credit-hours were eliminated from the curriculum, reducing the required number of credit-hours to complete the degree from 125 to 123. **Most importantly, the proposed BS NE program requires no additional faculty and conservative estimates indicate that the program will be immediately profitable for KSU.**

It is also important to note that BS NE and BS ME degree programs include some similar coursework, which is typical for these degrees at other universities. Under existing BS ME program policies and proposed BS NE program policies, a student could obtain the BS ME and BS NE in as few as 131 credit-hours and in four years. **Therefore, students will have a clear path to obtaining the BS ME degree while also obtaining the BS NE degree. This is likely to be of increased interest to students prior to BS NE degree ABET accreditation, which is anticipated to occur in 2029.**

IV. Program Demand: Market Analysis

The primary customers for this major are expected to be on-campus students who plan to enter the nuclear engineering workforce in Kansas or at other locations in the United States. **KSU has the only nuclear engineering program in Kansas at any level and is poised to become a regional leader in undergraduate nuclear engineering education**. Similar undergraduate programs exist at Colorado School of Mines (n.d.) and Missouri University of Science and Technology (n.d.), but there are no colleges or universities offering BS NE degrees in Nebraska, South or North Dakota, Minnesota, Iowa, Oklahoma, or Arkansas. Oklahoma State University (n.d.) and the University of Texas-Austin offer a nuclear engineering minor (n.d.). Texas A&M University offers the BS NE degree (n.d.), but many students from Texas to seek engineering degrees at Kansas State University for various reasons. The University of New Mexico offers a BS NE degree (n.d.), as well.

Demand for nuclear engineering courses at KSU as judged by enrollment in the NE Option subplan has been substantially increasing over the last few years. From 2019-2021, an average of 35 students each academic year pursued the NE Option subplan. Over the last few years, that number has increased to 58 students in AY 2023-2024, representing an increase of more than 65%. This increase in students pursuing the NE Option is likely related to the availability of scholarships for nuclear engineering students, through professional organizations such as the American Nuclear Society (n.d.) and federal agencies such as the US Department of Energy (Nuclear Energy University Programs, n.d.), and the recent bipartisan recognition (U.S. Senate Committee on Environment & Public Works, 2024) that nuclear power must play a prominent role in baseload power generation as demand for electrical power continues to increase in the United States and across the world.

V. Projected Enrollment for the Initial Three Years of the Program

Year	Total Headcount Per Year		Total Sem Credit Hrs Per Year	
	Full- Time	Part- Time	Full- Time	Part- Time
Implementation	83	0	450	0
Year 2	87	0	468	0
Year 3	90	0	486	0

NE Option enrollment for students classified as juniors or seniors was 22 in 2021, 26 in 2022, and 41 in 2023. We

expect that the growth trends would continue and then level off, with projected numbers of 50 in AY2026, 55 in AY2027, 58 in AY2028, and 60 in AY2029.

The total headcount in the proposed program in AY26, AY27, and AY28, was estimated by multiplying the projected numbers for these years based on junior/senior NE option students by a factor of 1.5. This factor accounts for freshmen and sophomore contributions to the headcount while conservatively accounting for students who enter the program greater than freshman status due to transfer credits and current students who may elect to remain in the NE Option.

Only required NE courses were included in the calculation of total semester credit hours per year shown above. These values were calculated by assuming that 20% of the headcount takes each required NE course each year. This conservatively assumes an average time to graduation of 5 years. The proposed program is designed for students to complete the BS NE degree in 4 years with reasonable courseloads each semester.

VI. Employment

Nuclear engineering is a versatile discipline with graduates that work in the commercial power, government, defense, and health sectors of the economy. Within the State of Kansas and the greater Kansas City metropolitan area, nuclear engineers work for entities including Honeywell Kansas City National Security Campus, Wolf Creek Nuclear Operating Corporation, Evergy, Enercon, Kiewit, Burns and McDonnell, Kansas Department of Health and Environment, and Radiation Detection Technologies, Inc., a Manhattan, Kansas-based small business that was founded out of the KSU Semiconductor Materials and Radiological Technologies Laboratory. Across the country, nuclear engineering graduates from KSU work at NASA's Lyndon B. Johnson Space Center, Westinghouse, General Electric-Hitachi, Nebraska Department of Health and Human Services, Bettis Atomic Power Laboratory, Los Alamos National Laboratory, Idaho National Laboratory, Naval Information Warfare Systems Center Pacific, and Oak Ridge National Laboratory, among others.

The US Bureau of Labor and Statistics (BLS) Occupational Outlook Handbook (2023) indicates a small decline in the number of nuclear engineering positions over the next decade; however, the job outlook predicts about 700 openings for nuclear engineers per year on average over the period of 2023-2033, driven by retirements in the nuclear engineering workforce. BLS estimates do not account for the requisite expansion of nuclear power in the US to meet increasing demand, driven higher by data centers feeding the on-going AI boom. For example, **nuclear electric power generation jobs increased by nearly 1600 in 2023** alone (U.S. Department of Energy, 2024), far outpacing the BLS outlook. Furthermore, a recent US Department of Energy report (2024) on advanced nuclear power commercial deployment indicates that **a workforce of nearly 400,000 people is required to meet US Government nuclear energy production goals by 2050**. A large fraction of that workforce will consist of nuclear engineers who work on design, licensing, and operation of nuclear power plants. Nuclear engineers are well-compensated, with **2023 median pay of $125,460 per year for roles that typically require only a bachelor's degree and no work experience in a related occupation** (U.S. Bureau of Labor Statistics, 2023). In summary, demand for nuclear engineers is certain to remain strong and is likely to increase substantially over the next decade, and nuclear engineering salaries are likely to remain very high relative to other engineering disciplines.

VII. Admission and Curriculum

A. Admission Criteria

The admission criteria are the same as those of the KSU Carl R. Ice College of Engineering.

B. Curriculum

Year 1: Fall **SCH = Semester Credit Hours**

Course #	Course Name	SCH

ME 212	Engineering Graphics	2
MATH 220	Analytic Geometry and Calculus I (KSC 030)	4
DEN 160	Engineering Orientation	1
DEN 161	Engineering Problem Solving	1
CHM 210	Chemistry I	4
ENGL 100	Expository Writing I (KSC 010)	3
	Total Hours	15

Year 1: Spring

Course #	Course Name	SCH
MATH 221	Analytic Geometry and Calculus II	4
PHYS 213	Engineering Physics I (KSC 040)	5
CHE 354	Basic Concepts in Materials Science and Engineering	1
CHE 355	Fundamentals of Mechanical Properties	1
COMM 106	Public Speaking (KSC 020)	3
ENGL 200	Expository Writing II (KSC 010)	3
	Total Hours	17

Year 2: Fall

Course #	Course Name	SCH
CIS 209	Computer Programming for Engineers (Python)	3
MATH 222	Analytic Geometry and Calculus III	4
PHYS 214	Engineering Physics II	5
NE 495	Elements of Nuclear Engineering	3
	Total Hours	15

Year 2: Spring

Course #	Course Name	SCH
	Social & Behavioral Sciences Requirement (KSC 050) *	3
MATH 340	Differential Equations	4
CE 333	Statics	3
ME 513	Thermodynamics	3
NE 415	Introduction to Engineering Analysis	3
	Total Hours	16

Year 3: Fall

Course #	Course Name	SCH
	Social & Behavioral Sciences Requirement (KSC 050) *	3
CE 533	Mechanics of Materials	3
ME 512	Dynamics	3
ECE 519	Electric Circuits for Engineers	3
NE 690	Radiation Protection and Shielding	3
	Total Hours	15

Year 3: Spring

Course #	Course Name	SCH
	Arts & Humanities Requirement (KSC 060) **	3
	Restricted Technical Elective ***	3

ME 571	Fluid Mechanics	3
NE 650	Nuclear Fuel Cycles +	3
NE 612	Principles of Radiation Detection	3
	Total Hours	15

Year 4: Fall

Course #	Course Name	SCH
ME 573	Heat Transfer	3
ME 574	Interdisciplinary Industrial Design Project I	3
NE 640	Nuclear Reactor Thermal Hydraulics	3
NE 630	Nuclear Reactor Theory	3
	Free Electives {Institutionally Designated Area} (KSC 070)	3
	Total Hours	15

Year 4: Spring

Course #	Course Name	SCH
	Arts & Humanities Requirement (KSC 060) **	3
NE 585	Nuclear Engineering Design Projects +	3
NE 648	Nuclear Reactor Laboratory	3
	Free Electives {Institutionally Designated Area} (KSC 070)	3
	Nuclear Engineering Elective ++	3
	Total Hours	15

* Any two courses meeting KSC-5 requirements may be taken
** Any two courses meeting KSC-6 requirements may be taken
*** Any course from the restricted elective list may be taken
\+ New course not yet in undergraduate catalog
++ Any course from the nuclear engineering elective list may be taken

Total Number of Semester Credit Hours ……. 123

To graduate with a Bachelor of Science in nuclear engineering, students must have a ≥ 2.200 GPA in all ME/NE classes ≥ 400 level taken for undergraduate credit at Kansas State University. Course grades that have been removed by the K-State Retake policy will not apply to this GPA calculation.

***List of restricted electives**

- NE at or above the 300 level
- ME at or above the 500 level (except ME 519)
- BAE at or above the 200 level
- BME at or above the 200 level
- CE at or above the 200 level (except CE 202, CE 212, CE 530)
- CHE at or above the 200 level
- CIS at or above the 200 level
- ECE at or above the 200 level
- ENVE at or above the 200 level
- IMSE at or above the 200 level
- MATH at or above the 500 level
- CHM at or above the 230 level
- PHYS at or above the 325 level
- BIOL at or above the 190 level

- BIOCH at or above the 250 level
- STAT at or above the 500 level
- GEOL at or above the 360 level

++List of nuclear engineering electives

- NE at or above the 600 level
- ME 777: Monte Carlo Methods
- ME 760: Engineering Analysis I

VIII. Core Faculty

Note: * Next to Faculty Name Denotes Director of the Program, if applicable
FTE: 1.0 FTE = Full-Time Equivalency Devoted to Program

Faculty Name	Rank	Highest Degree	Tenure Track Y/N	Academic Area of Specialization	FTE to Proposed Program
Amir Bahadori *	Associate Professor	PhD	Y	Radiation Protection	0.1875
Ronnie Brockhoff	Teaching Associate Professor	PhD	N	Radiation Transport	0.25
Anna Iskhakova	Research Assistant Professor	PhD	N	Thermal Hydraulics Nuclear Fuels	0.125
Arsen Iskhakov	Assistant Professor	PhD	Y	Thermal Hydraulics	0.125
Douglas McGregor	University Distinguished Professor	PhD	Y	Radiation Detection Nuclear Materials	0.125
Walter McNeil	Associate Professor	PhD	Y	Radiation Detection Systems	0.125
Jeremy Roberts	Associate Professor	PhD	Y	Reactor Physics	0.4375

Number of graduate assistants assigned to this program ..... **1 (existing)**

IX. Expenditure and Funding Sources

A. EXPENDITURES	First FY	Second FY	Third FY
Personnel – Reassigned or Existing Positions			
Faculty	$	$	$ 155,900
Administrators *(other than instruction time)*	$	$	$ 0
Graduate Assistants	$	$	$ 26,500
Support Staff for Administration (*e.g., secretarial*)	$	$	$ 0
Fringe Benefits *(total for all groups)*	$	$	$ 55,200
Other Personnel Costs	$	$	$ 0
Total Existing Personnel Costs – Reassigned or Existing	$ 224,000	$ 230,800	$ 237,600

Personnel – New Positions			
Faculty	$	$	$ 0
Administrators *(other than instruction time)*	$	$	$ 0
Graduate Assistants	$	$	$ 0
Support Staff for Administration (*e.g., secretarial*)	$	$	$ 0
Fringe Benefits *(total for all groups)*	$	$	$ 0
Other Personnel Costs	$	$	$ 0
Total Existing Personnel Costs – New Positions	$ 0	$ 0	$ 0
Start-up Costs - One-Time Expenses			
Library/learning resources	$	$	$ 0
Equipment/Technology	$	$	$ 0
Physical Facilities: Construction or Renovation	$	$	$ 0
Other	$	$	$ 0
Total Start-up Costs	$ 0	$ 0	$ 0
Operating Costs – Recurring Expenses			
Supplies/Expenses	$	$	$ 0
Library/learning resources	$	$	$ 0
Equipment/Technology	$	$	$ 0
Travel	$	$	$ 0
Other	$	$	$ 0
Total Operating Costs	$ 0	$ 0	$ 0
GRAND TOTAL COSTS	$ 224,000	$ 230,800	$ 237,600

B. FUNDING SOURCES *(projected as appropriate)*	Current	First FY (New)	Second FY (New)	Third FY (New)
Tuition / State Funds		$ 216,000	$ 235,800	$ 257,100
Student Fees		$ 47,500	$ 49,400	$ 51,300
Other Sources		$ 0	$ 0	$ 0
GRAND TOTAL FUNDING		$ 263,500	$ 285,200	$ 308,400
C. Projected Surplus/Deficit (+/-) (Grand Total Funding *minus* Grand Total Costs)		$ 39,500	$ 54,400	$ 70,800

X. Expenditures and Funding Sources Explanations

A. Expenditures

Personnel – Reassigned or Existing Positions

The faculty members identified in Section VIII, Core Faculty, will contribute the stated fractional FTE to the program. The cost to the program was estimated by multiplying the salary and associated fringe for each faculty member by the stated fractional FTE. For Ronnie Brockhoff, this number was multiplied by 0.2 to account for the fact that NE 495, Elements of Nuclear Engineering, will be taken by both BS ME and BS NE students for the foreseeable future, and approximately 20% of the students each year are anticipated to be BS NE students. All current salaries were inflated by 3% per year to account for cost-of-living adjustments, including for AY 2025-2026. Fringe was estimated as 33% of salary.

One GTA with an AY 2025-2026 salary of $25,000 will be allocated to the program. This salary was inflated by 3% per year to account for cost-of-living adjustments. Fringe was estimated as 14% of salary for the GTA.

All values presented in the table were rounded to the nearest $100.

Personnel – New Positions

No new positions required for this program.

Start-up Costs – One-Time Expenses

No start-up costs required for this program.

Operating Costs – Recurring Expenses

No recurring expenses required for this program. Existing nuclear engineering laboratories are being maintained by the Alan Levin Department of Mechanical Engineering using departmental funds.

B. Revenue: Funding Sources

The AY 2024-2025 base tuition rate for undergraduate students at KSU is $341.42 per credit hour for in-state status and $919.65 per credit hour for out-of-state status (Kansas State University, 2024). Engineering fees are $105.60 per credit hour for both in-state and out-of-state students (Kansas State University, 2024). For the purposes of computing tuition revenue, we assume that 80% of BS NE students have in-state status while 20% of BS NE students have out-of-state status, roughly corresponding to data from the most recent KSU Carl R. Ice College of Engineering fact book (Kansas State University College of Engineering, 2024).

An inflation rate of 5% is applied to base tuition, including for AY 2025-2026, corresponding to recent historical trends (Kansas State University College of Engineering, 2024). Engineering fees have not changed in recent years and are conservatively assumed to remain constant through the first three years of the program.

C. Projected Surplus/Deficit

Even under conservative assumptions, the proposed program will be immediately profitable, with a growing profit margin over the first three years. The return-on-investment is projected to grow from 18% in the first year to 30% in the third year. The program is projected to be profitable with a minimum enrollment of about 70 students.

XI. References

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Summary

Kansas State University is proposing changes to Qualified Admissions for freshman applicants under the age of 21. K-State proposes to admit such students having a 21 or higher ACT score and a cumulative high school GPA of at least a 2.5, or students having a cumulative high school GPA of at least a 3.0, regardless of test score. Such applicants would still be required to have at least a 2.0 GPA on any college coursework taken while in high school. Board staff recommends approval. If the changes in admissions requirements are approved, regulatory amendments are required to effect such changes.

May 14, 2025

Background

In September of 2019, the Board approved changes to Qualified Admission criteria, removing the pre-college curriculum requirement for freshman applicants under the age of 21, and the option of ranking in the top one-third of the class, and adding the option for guaranteed admission with at least a 2.25 cumulative high school GPA for freshmen at Emporia State University, Fort Hays State University, Pittsburg State University, and Wichita State University, regardless of ACT score. These institutions will also admit freshmen under the age of 21 with an ACT score of at least 21. All the aforementioned options require a student to achieve at least a 2.0 GPA on any transferable college coursework taken while in high school. KU's new admissions criteria of a minimum 3.0 high school GPA regardless of test score or an ACT score of 24 with a minimum high school GPA of 2.5 of a 4.0 scale were approved during the Spring 2025 term, and will not go into effect before the fall semester of 2029. KU will also continue to require at least a 2.0 GPA on any transferable college coursework taken while in high school.

Currently, Kansas State University requires the following:

- minimum 3.25 high school GPA, or
- minimum of 21 on the ACT

Qualified Admissions Matrix

Admission is guaranteed for resident and non-resident freshmen applicants under the age of 21 if they meet either the GPA or ACT criteria outlined below unless otherwise specified.

	Cumulative High School GPA	Cumulative College Credit Hours GPA	Minimum ACT Composite Score
Emporia State University	2.25	2.00	21
Fort Hays State University	2.25	2.00	21
Pittsburg State University	2.25	2.00	21
Wichita State University	2.25	2.00	21
University of Kansas	3.00	2.00	24*
Kansas State University Current	3.25	2.00	21
Kansas State University Proposed	3.00	2.00	21**

**The University of Kansas will require a 24 minimum ACT and at least a 2.5 high school GPA for guaranteed admission. These changes were approved by the Board on February 12, 2025.*

***Kansas State University is proposing a 21 minimum ACT and at least a 2.5 high school GPA for guaranteed admission.*

Proposal

Kansas State is proposing the following guaranteed options for freshmen:

- minimum 3.0 high school GPA regardless of test score or with no test score, *or*
- minimum of 21 on the ACT and a minimum 2.5 high school GPA

Both above options would continue to require a student to achieve at least a 2.0 GPA on any transferable college coursework while in high school.

Timing
Kansas State would like the above options to be effective as soon as possible in accordance with K.S.A. 76-717. Should the Board approve these changes, the process of updating the associated regulations will begin, which typically requires nine to twelve months. Once that process is completed, the Board will need to act on the regulations. Further, per K.S.A. 76-717,

> *Rules and regulations adopted pursuant to this subsection that are more rigorous than those set forth in subsection (a) shall not be effective prior to the first day of the fourth academic year following the year in which the rules and regulations are adopted.*

Paraphrasing subsection (a) of the statute, each resident graduating from an accredited high school (under the age of 21) must achieve one of the following:

- completion of pre-college curriculum (or functional equivalent) with a minimum 2.0 high school GPA, **OR**
- minimum of 21 on ACT, **OR**
- rank in top one-third of high school class

K-State's proposed admission requirements for a resident graduating from an accredited high school include one of the following:

- minimum 3.0 high school GPA regardless of test score or with no test score, *or*
- minimum of 21 on the ACT and a minimum 2.5 high school GPA

The proposed requirements appear more rigorous than those set forth in subsection (a) of K.S.A. 76-717. **Given the levels of approval required and the waiting period required by state statute, the soonest the proposed requirements could go into effect would be for students applying for the Fall 2029 semester (Academic Year 2030).**

Rationale
K-State has provided the following rationale to support the proposed changes.

- both yield and retention rates are lower for students admitted by test score alone over the last five years;
- maintains competitive admission criteria with other Midwest universities with high or very high research activity;
- expands the GPA- based admission pathway to students with cumulative high school GPA of 3.0 - 3.24 providing increased access as the state's signature land grant university;
- students who do not meet qualified admission requirements will still go through a holistic committee review for consideration.

Recommendation
Board staff recommends approval of K-State's proposed changes to Qualified Admission requirements. If approved, the regulatory change process will begin.

April 15, 2025

Dr. Blake Flanders
President and CEO
Kansas Board of Regents
1000 SW Jackson Street, Ste 520
Topeka, KS 66612-1368

Dear Dr. Flanders:

Fort Hays State University respectfully requests approval to revert the title of its Bachelor of Arts in Performing Arts degree back to Bachelor of Arts in Music.

In Fall 2018, FHSU transitioned the degree title from B.A. in Music to B.A. in Performing Arts to support the development of a concentration in theatre. However, the theatre concentration was formally discontinued in Fall 2024. Additionally, the National Association of Schools of Music (NASM), the specialized accrediting body for the music program, has informed the university that it does not recognize the "Performing Arts" degree title for purposes of accreditation. NASM has further indicated that continued use of this title would place the program out of compliance with accreditation standards.

Considering these developments, FHSU seeks approval from the Kansas Board of Regents to restore the original B.A. in Music designation, effective Fall 2025.

We appreciate your consideration of this request and remain committed to aligning our academic offerings with both student needs and accreditation requirements.

Sincerely,

Jill Arensdorf

Jill Arensdorf, Ph.D.
Provost and Vice President for Academic Affairs

c: Dr. Angela Pool-Funai
Dr. David Macey
Mr. Benjamin Cline