KANSAS BOARD OF REGENTS
ACADEMIC AFFAIRS STANDING COMMITTEE

MEETING AGENDA
Tuesday, June 18, 2024
10:30 a.m. – 12:00 p.m.

The Board Academic Affairs Standing Committee (BAASC) will meet virtually via Zoom. You can listen to the meeting at the Board offices, located at 1000 SW Jackson, Suite 520, Topeka, Kansas 66612.

I.	**Call to Order**	Regent Lane, Chair	
	A. Roll Call and Introductions		
	B. Approve minutes from June 4, 2024		p. 3
II.	**Board Discussion Agenda Items**		
	A. Program Review Recommendations for KU's BA/BS Geography and BA/BM Music	Regent Lane, Chair	p. 7
	B. Request for BS in Engineering Physics to Exceed 120 Hours - KU	Barb Bichelmeyer	p. 13
III.	**Other Matters**		
	A. Reverse Transfer Update	Mistie Knox	
	B. Academic Affairs Update	Academic Affairs Staff	
	C. Good News on Campus (Universities)	Universities	
IV.	**Next BAASC Meeting – September 2024**		
V.	**Adjournment**		

BOARD ACADEMIC AFFAIRS STANDING COMMITTEE

Four Regents serve on the Board Academic Affairs Standing Committee (BAASC), established in 2002. The Regents are appointed annually by the Chair and approved by the Board. BAASC meets virtually approximately two weeks prior to each Board meeting. The Committee also meets the morning of the first day of the monthly Board meeting. Membership includes:

Cynthia Lane, Chair

Carl Ice

Alysia Johnston

Diana Mendoza

Board Academic Affairs Standing Committee

AY 2024 Meeting Schedule

BAASC Academic Year 2023- 2024 Meeting Dates			
Meeting Dates	**Location**	**Time**	**Agenda Materials Due**
September 5, 2023	Virtual Meeting	9:00 a.m.	August 15, 2023
September 20, 2023	Topeka	10:30 a.m.	August 30, 2023
October 3, 2023	Virtual Meeting	9:00 a.m.	September 12, 2023
October 18, 2023	University of Kansas	3:00 p.m.	September 27, 2023
October 31, 2023	Virtual Meeting	9:00 a.m.	October 10, 2024
November 15, 2023	Emporia State University	10:30 a.m.	October 25, 2023
November 28, 2023	Virtual Meeting	9:00 a.m.	November 14, 2023
December 13, 2023	Topeka	10:30 a.m.	November 29, 2023
January 2, 2024	Virtual Meeting	9:00 a.m.	December 12, 2023
January 17, 2024	Topeka	10:30 a.m.	December 27, 2023
January 30, 2024	Virtual Meeting	9:00 a.m.	January 9, 2024
February 14, 2024	Topeka	10:30 a.m.	January 24, 2024
March 5, 2024	Virtual Meeting	9:00 a.m.	February 13, 2024
March 20, 2024	Topeka	10:30 a.m.	February 28, 2024
April 2, 2024	Virtual Meeting	9:00 a.m.	March 12, 2024
April 17, 2024	Fort Hays State University	10:30 a.m.	March 27, 2024
April 30, 2024	Virtual Meeting	9:00 a.m.	April 9, 2024
May 15, 2024	Topeka	10:30 a.m.	April 24, 2024
June 4, 2024	Virtual Meeting	9:00 a.m.	May 14, 2024
June 18, 2024	Virtual Meeting	10:30 a.m.	May 29, 2024

Please note virtual meeting times are 9 a.m., and Board day meetings are 10:30 a.m. unless otherwise noted.

Board Academic Affairs Standing Committee
MINUTES
Tuesday, June 4, 2024

The June 4, 2024, meeting of the Board Academic Affairs Standing Committee (BAASC) of the Kansas Board of Regents was called to order by Regent Lane at 9:00 a.m. The meeting was held in person at the Board office, with a virtual option available.

In Attendance:
Members: Regent Lane Regent Ice Regent Johnston Regent Mendoza

Approval of Minutes
Regent Ice moved to approve the May 15, 2024, meeting minutes; Regent Johnston seconded, and the motion passed.

Board Consent Agenda Items
Jennifer Armour pointed out a correction to the effective date listed on page 8 of the agenda, which should read July 1, 2025, not 2024. Ms. Armour provided a State Authorization Reciprocity Agreement (SARA) update. The committee for program integrity and institutional quality met to discuss the U.S. Department of Education's 2024 negotiated rulemaking. These discussions included potential impacts to the State Authorization Reciprocity Agreement. The negotiators could not reach a consensus. Therefore, the Department may propose new regulations as they see fit. The proposed rule changes may include a five hundred student rule, the enforcement of state laws related to closure, the application of states' general-purpose laws, the complaint process, and the composition of the NC-SARA Board. Finalization of these rules is still pending, and updates will be provided as they are received.

Board Discussion Agenda Items
Regent Lane provided a recap of the program review process and the purpose of the meeting today. The recommendations made for the 31 programs that have been reviewed will go before the Board at the June 20 meeting for final approval.

The committee began with discussing the programs from Pittsburg State University. The first program discussed was the BS in Math. Regent Johnston moved to accept the action plan as proposed. Regent Mendoza seconded. The motion passed. The next program discussed was the BS in History. Regent Mendoza moved to accept the recommendation of the action plan as presented. Johnston seconded. The motion passed. The BS in Polymer Chemistry was discussed next. Regent Johnston moved to accept the recommendation of the action plan as presented. Regent Mendoza seconded. The motion passed. The BS in Physics was discussed next. Regent Johnston moved to accept the recommendation of the action plan as presented. Regent Ice seconded. The motion passed. The BM in Music was discussed next. Regent Mendoza moved to accept the recommendation of the action plan as proposed. Regent Johnston seconded. The motion passed. The final program discussed was the BBA in International Business. Regent Johnston moved to accept the recommendation of phase out. Regent Mendoza seconded. The motion passed.

The programs from University of Kansas were discussed next. The first program discussed was the BA/BGS in African & African American Studies. There was discussion about a merger with another program. Provost Bichelmeyer provided additional information pertaining to the financial ramifications of a merger, including the loss of funding. Regent Ice recommended moving forward with the action plan as presented with a proviso. Regent Johnston moved to reject the action plan at the University of Kansas for African & African American Studies and asked that they merge or meet 3 of the 4 KBOR targets by 2026. There was no second. The motion failed. Regent Ice moved to accept the action plan with the proviso that the program meets 3 of the 4 metrics by July 1, 2026. Regent Mendoza seconded. The motion passed. The BA/BGS in American Studies was discussed

next. Regent Mendoza moved to accept the recommendation of the action plan. Regent Ice seconded. Regent Johnston voted no. The vote was split and the motion died. Regent Lane moved to accept the action plan with the proviso that the program meet or exceed 3 of the 4 thresholds within 3 years. Regent Johnston seconded. Provost Bichelmeyer pointed out that their proposed action plan aligns with Regent Lane's motion. Regent Ice moved to modify the second motion to accept the proposal as presented. Regent Mendoza seconded. The motion passed. The next program discussed was the BSE in Physical Education Plus. Regent Mendoza moved to accept the merger plan as presented. The motion was seconded was passed. The BA in Global & International Studies was discussed next. Regent Johnston moved to accept the action plan as presented. Regent Mendoza seconded. The motion passed. The BA/BGS in Religious Studies was discussed next. Regent Mendoza moved to accept the action plan as written. Regent Ice seconded. Regent Lane pointed out the inconsistency of this motion compared to previous motions for programs with similar which were approved with provisos. Regent Ice moved to modify the motion to accept the action plan with the proviso that it meets 3 of the 4 targets within 3 years. The motion passed. The sixth program discussed was the BA in Jewish Studies. Provost Bichelmeyer provided information regarding the loss of funding if a merger is undertaken. After further discussion it was noted that the date for the previous motions were incorrect. Regent Ice moved to amend the date of the previous motions to all be July 1, 2027. Regent Johnston seconded. The motion passed. Regent Johnston moved to accept the action with the proviso that they meet at least 3 of the 4 targets by July 1, 2027. Regent Ice seconded. The motion passed. The BA/BS in Astronomy was discussed next. Regent Johnston moved to accept the action plan. Regent Ice seconded. Regent Mendoza inquired about including the proviso. Regent Johnston moved to modify the motion to accept the action plan as written with the proviso that they meet 3 of the 4 targets by July 1, 2027. Regent Mendoza seconded. The motion passed. During discussion about the talent pipeline, Regent Lane suggested graduate school and student credit hour production be noted for consideration as additional metrics in the future. The BS in Atmospheric Science and the proposed action plan were discussed next. Regent Johnston moved to accept the action plan as written. Regent Ice seconded. The motion passed. The next program discussed was the BA/BGS in Geography. Regent Ice moved to accept the action plan as proposed. Regent Johnston seconded. The motion passed. The BA/BFA/BM in Music was discussed next. Regent Mendoza moved to accept the action plan as proposed. Regent Johnston seconded. The motion passed. The final program discussed for University of Kansas was the BS in Engineering Physics. Regent Johnston moved to accept the action plan as presented. Regent Mendoza seconded. The motion passed.

The programs for Kansas State University were discussed next. The first program discussed was the BA/BS in Geography. Regent Mendoza moved to accept the recommendation of the action plan as presented. Regent Johnston seconded. The motion passed. The last program discussed was the BA/BM in Music. Regent Johnston moved to accept the action plan with the proviso. Regent Mendoza seconded. The motion passed.

The BSE in Business (Education) at Emporia State University was discussed next. Regent Mendoza moved to accept the recommendation of phase out as presented. Regent Johnston seconded. The motion passed. The final program discussed was the BA/BFA in Theatre. Regent Ice moved to accept the action plan as proposed. Regent Johnston seconded. The motion passed.

Next, the programs for Wichita State University were reviewed. The BA in Women's Studies was reviewed first. Regent Johnston moved to accept the merger. Regent Mendoza seconded. The motion passed. Next, the BA in Philosophy was discussed. Regent Ice moved to accept the action plan as proposed. Regent Johnston seconded, and the motion passed. The BA in Women's, Ethnicity, and Intersectional Studies was discussed next. Regent Johnston moved to accept the merge as proposed. Mendoza seconded, and the motion passed. Regent Mendoza moved to accept the action plan as presented for the BA in Philosophy. Regent Johnston seconded, and the motion passed. The BA/BS in Geology was reviewed next. Regent Mendoza moved to accept the action plan as presented. Regent Johnston seconded. The motion passed. Next, the BA/BS in Physics was discussed. Regent Ice moved to accept the action plan as presented. Regent Mendoza seconded. The motion passed. Regent Lane requested credit hour production be added to future discussions for consideration in the review process.

Finally, the proposed action plan for BS in Forensic Sciences was discussed. Regent Mendoza moved to accept the action plan as presented. Regent Johnston seconded. The motion passed.

Finally, the programs for Fort Hays State University were discussed. The BM in Music was discussed first. Regent Johnston moved to accept action plan as presented. Regent Ice seconded. The motion passed. The BA in Philosophy was discussed next. Provost Arensdorf provided an explanation of the process to decide where the program will be merged. This merge will not have any impact on students currently in the program. Regent Johnston moved to accept the merge as presented. Regent Ice seconded. The motion passed. Next, the BA in Modern Language (Spanish) and the proposed action plan was discussed. Regent Ice moved to accept as presented. Regent Mendoza seconded. The motion passed. The BA/BS in Physics was discussed next. Regent Johnston moved to accept the action plan as presented. Regent Mendoza seconded, noting the action plan includes the provision that if the program doesn't meet at least 3 of the 4 metrics, a merge will occur. The motion passed. Finally, the BM in Music and the proposed action plan was discussed. Regent Mendoza pointed out that this action plan includes the provision that if the program doesn't meet at least 3 of the 4 metrics after 3 years, a merge or phase out will occur. She then moved to accept the action plan as written. Regent Johnston seconded. The motion passed.

Board Consent Agenda Items

Barb Bichelmeyer, University of Kansas, provided a summary of the Competency-Based Education process at Kansas University. Features of this program include direct assessment, asynchronous learning, 16-week calendars, subscription-based tuition pricing, and a shared faculty model. The key working groups in developing this program included business processes & systems, curriculum development & learning, information technology, policy & regulatory compliance, student journey supports, and leadership.

Provost Bichelmeyer presented the program approval request for the MS in Human & Organizational Performance Effectiveness (HOPE). Regent Johnston moved to approve the request. Regent Ice seconded. The motion passed.

Provost Bichelmeyer presented the program approval for the MSE in Secondary STEM Education. Regent Mendoza moved to approve the request. Regent Johnston seconded. The motion passed.

Regent Ice requested the CBE presentation, along with the two approved programs from University of Kansas be added to the discussion agenda for the Board meeting.

Shirley Lefever, Wichita State University, presented the program approval request for the Associate of Science. Regent Mendoza moved to approve the request. Regent Ice seconded. The motion passed.

Board Discussion Agenda Items

Karla Wiscombe provided a summary on four Systemwide Transfer Associate Degrees. The programs included are Business Administration, Management, & Operations; Computer Science; Pre-Bachelor of Science in Nursing; and Pre-Social Work and will go into effect in Fall of 2025. Regent Johnston moved to approve the Systemwide Transfer Associate Degrees as presented by Dr. Wiscombe. Regent Ice seconded. The motion passed.

Rusty Monhollon provided a summary of the revisions to the New Academic Units and Academic Programs for State Universities Policy. Gage Rohlf provided clarification on what the current policy states and allows regarding the awarding of associate degrees. He also provided clarification that the requested change is specifically expanding the degree types. Regent Johnston moved to accept the additional modification as presented. Regent Mendoza seconded. The motion passed. Regent Lane requested the reverse transfer policy be added to a future agenda for further discussion and possible revisions to the policy.

Adjournment

The next BAASC meeting will be held virtually on June 18th, 2024.

The meeting was adjourned at 10:57 a.m.

Geography (Bachelor of General Studies/Arts/Science Geography)

Preliminary Analysis			
Student Demand	Degree Production	Talent Pipeline	Student ROI
		✓	✓
16.25 Majors (4-Year Average)	6.25 Degrees (4-Year Average)	59.09% Employed in Region Within 1 Year After Graduation (4-Year Average)	$46,649 Median Salary 5 Years After Graduation

Other Universities Offering Program		
Other KS Public Universities Offering Program	# of KS Private Universities Offering Program [n]	State Market Share Completion Data
3: FHSU, K-State, & PSU	N/A	31.68%

Recommendation (Phase out, Merge, or Action Plan):

Action Plan

Required additional information – Please insert below this box

- If Phase out, provide phase out plan including detail on how institution will reinvest resources from phase-out program into other academic programs/services.
- If Merge, provide merge plan including detail on immediate cost savings. Include how this plan will impact your FTE for merged program(s).
- If Action Plan, provide action plan and indicate how plan will improve metrics (Student Demand, Degree Production, Talent Pipeline, and/or Student ROI) where program did not meet minima.

Student Demand
Target by End of AY27: 19 Majors (25 by AY30)

Degree Production
Target by End of AY27: 7 Degrees (10 by AY30)

Student demand for the Geography majors varied between 39 and 20 from fall 2014 to fall 2019. Beginning fall 2020, the number of junior/senior majors dropped sharply to between 13 and 16 (KU Visual Analytics/Major counts). The strategies below are intended to rebuild the number of majors in the program.

Strategy

Backward Design of Curriulum -In fall 2023, the department unit began a Center for Teaching Excellence (CTE) Ideas to Action-sponsored initiative that is expected to positively impact these indicators. The CTE-sponsored effort builds on the department's previous self-study that identified its introductory Geographical Information Systems (GIS) course as a pipeline for geography majors. A strong geography program will also continue to benefit closely allied programs which the geography faculty have led and continue to lead, such as Environmental Studies and Global and International Studies.

The department's initiative employs a data-informed backwards design process to build such a program and is focused on creating visible and accessible pathways for students. The work, in progress, is divided into three sequential phases guided by the following questions:

1) ***What are the geographic skills most sought after by employers; what skills do other programs (and their students, by extension) seek by requiring, or making optional, our geography courses?***
2) ***How do those skills map onto the current pool of instructional expertise we have in our department and the courses we offer?***
3) ***What message (our brand/re-brand) best communicates the value of geographic skills to prospective students, parents, and employers?***

A focus on GIS and other geospatial methods is consistent with 5-10-year annual growth rates of 9% for GIS analysts (Zippia) and a 5% increase for cartographers and photogrammetrists (Bureau of Labor). The region also offers an above average number of geography jobs (Bureau of Labor), which are heavily tilted toward those with GIS skills. Furthermore, a wide variety of majors across campus would benefit from the increased focus on GIS and its applications.

Raising the department's major and graduation numbers to the KBOR thresholds of 25 and 10 by the end of the next three-year period would necessitate annual increases of 2.9 majors and 1.25 graduates for a three-year period. Given the time required to formulate and make curricular changes outlined above, this is does not appear to be a realistic goal over a three-year period, but one that would likely be reachable over a six-year timeframe.

Music(Bachelor of Music OR Bachelor of Fine Arts/Arts in Music)

Preliminary Analysis			
Student Demand	Degree Production	Talent Pipeline	Student ROI
✓	✓		
74.75 Majors (4-Year Average)	22.25 Degrees (4-Year Average)	41.89% Employed in Region Within 1 Year After Graduation (4-Year Average)	$36,400 Median Salary 5 Years After Graduation

Other Universities Offering Program		
Other KS Public Universities Offering Program	# of KS Private Universities Offering Program	State Market Share Completion Data
6: ESU, FHSU, K-State, PSU, WSU, & WU	12	24.31%

Recommendation (Phase out, Merge, or Action Plan):

Action Plan

Required additional information – Please insert below this box

- If Phase out, provide phase out plan including detail on how institution will reinvest resources from phase-out program into other academic programs/services.
- If Merge, provide merge plan including detail on immediate cost savings. Include how this plan will impact your FTE for merged program(s).
- If Action Plan, provide action plan and indicate how plan will improve metrics (Student Demand, Degree Production, Talent Pipeline, and/or Student ROI) where program did not meet minima.

Talent Pipeline
Target by End of AY27: No change.
Anticipating increases by AY29

Student ROI
Target by End of AY27: No change.
Anticipating increases by AY29

These metrics are especially challenging for the Music degree due to two factors: 1) the exceptionally high rate at which students continue their education (53%, Lightcast) and 2) the significance of the "gig economy" for music majors.

1. **Graduate education** – Graduate school is considered a positive outcome for students and aligned with KU's mission. Recent alumni have pursued graduate studies at some of the most prestigious music programs in the country. A few representative examples include: Florida State University, Indiana University, New England Conservatory of Music, University of Chicago, University of Illinois, University of Kansas, University of Maryland, University of Michigan, University of North Texas, University of Rochester, Eastman School of Music, University of Texas, and Yale University.
2. **Gig economy** - Music alumni who seek gainful employment might work in the traditional labor market that is tracked by the Department of Labor but are more likely to work as freelancers in the gig economy, which operates mostly outside the scope of the Department of Labor data. Freelance work is critical for alumni from music programs across the country. Aggregated reports and white papers from the Strategic National Arts Alumni Project (SNAAP) generally report that 70–80% of arts alumni work as freelancers after completing their studies.

   Nonetheless, the School of Music has taken an important step that they believe, with time, will lead to a greater number of graduates employed locally, as well as earning above the minimum Student ROI.

Strategies

1. **New Concentration** – In response to market demand, in Fall 2024 the School will begin offering a Music Production & Technology concentration within the BA in Music. Alumni with this concentration will be more likely to pursue careers that will, eventually, begin to move the needle with the Department of Labor data concerning employment rate and salary.

   According to the industry analyses by Lightcast, the fastest growing employment sector in music is the broadly defined music industry (including such specific fields as music business, music production, and arts administration). The School of Music currently offers two certificate programs in Music Entrepreneurship and Music Recording. Similar programs at peer institutions have enrolled 80 majors within 5 years. Although they can't guarantee the same results, they see significant opportunities, since they are currently turning away students who are interested in music industry studies.

2. **Exploring Future Curricular Expansion** – They are also exploring the possibility of offering a professional degree in music industry studies. At this point, this conversation is in its earliest stages and they are waiting until they see the enrollment levels develop in the Music Production & Technology concentration for the BA in Music.

3. **Partnership with KU Alumni Association** - The department will work with the Alumni Association to encourage use of the Jayhawk Career Network.

   Within 3 years, it is unlikely they will see any significant change in the Department of Labor data concerning employment rate and salary. The new concentration in the BA in Music and future offerings in music industry studies will need four years, at least, to begin graduating significant numbers of students. Within 5 years, they expect some improvement as more new alumni

begin pursuing traditional employment, due to projected growth in the BA in Music—Music Production & Technology concentration. Within 10 years, the program anticipates that this effect will have a significant enough effect that the Department of Labor data for the Music Program will exceed the benchmarks that have been set.

4. **Data Collection** – The Department of Labor Data has significant shortcomings when it comes to tracking students with arts degrees. Data from the Strategic National Arts Alumni Project (SNAAP) indicates that approximately 80% of arts alumni are currently or have been freelancers.

   The data generated by KU's partnership with Lightcast seems more promising, since it collects data from more sources. Of note for the Music Program in this data:
   - 57% of alumni tracked in this data reside in Kansas or the Kansas City Metro Area.
   - The average estimated annual wage 1-5 years after graduation is reported as $41,705
   - 31% of alumni are employed in the degree field (other key fields include educational services; professional, scientific, and technical services; and ambulatory health care services).

   After consulting with peer institutions and with the accrediting agency, it is clear that there is more they could be doing to track alumni as their careers develop. The Department of Labor data may be limited, but their own efforts have suffered from very low response rates and so have not yet generated useful data. They will work with AIRE to find solutions to improve response rates to their own alumni survey. In addition, they will explore membership in SNAAP, which would provide additional information concerning their alumni and the perceived benefit of their curricula.

Additional Considerations

The School of Music noted additional two additional factors important to the discussion.

1. **Efficiency of Spending** – They asked their accreditation agency to run a report comparing their rate of spending per music major to those of other music programs in public, doctoral-granting universities with enrollments between 400 and 500 majors. This analysis shows that, among other schools of music similar to us, they are in the lowest quartile when it comes to spending per music major.

Table 1: Spending per music major at public, doctoral-granting universities, 400–500 majors

5th percentile	25th percentile	50th percentile	75th percentile	95th percentile
$9,151.30	$16,724.50	$17,945.00	$19,780.00	$21,938.50
KU School of Music			Average	
$15,559.00			$17,526.00	

2. **Local Economic Impact** – In 2015, the City of Lawrence participated in the Arts & Economic Prosperity V survey, offered by Americans for the Arts. Through this survey, Lawrence identified

that audience members at arts events spent an average of $24.25 each on secondary expenses (hotels, restaurants, gas stations, etc.). With inflation, this total would be $31.28 in 2024 dollars. Finding estimates for the School of Music are a unique challenge and any numbers will be an underestimate, since they are unable currently to track the number of audience members who attend the nearly 300 free concerts that they offer on an annual basis. However, they can offer an estimate of economic impact for the 18–20 ticketed events that they offer annually. In AY 2023, they sold 3488 seats and offered 478 complimentary passes (to faculty, students, prospective students, and guests). Using the rate from the Arts & Economic Prosperity V survey, they estimate that these 3966 concert attendees had an economic impact of $124,056 on the local economy in and around Lawrence.

In addition, they host events, festivals, and music camps throughout the year. They conservatively estimate that they bring roughly 10,000 K-12 students and their families to KU's campus. Assuming each of these 10,000 students brings one family member with them, these would suggest an additional economic impact of $625,600.

Consequently, they estimate that the School of Music has an impact of roughly $750,000 annually on the local economy in and around Lawrence. This is an underestimate, for the reasons noted above. It also fails to include the hundreds of events outside of KU that their students and faculty participate in as musicians. These include band gigs in Lawrence, Topeka, and Kansas City venues; solo recitals and other performances in churches, retirement communities, and other locations; and charity events, like the annual fundraising event that the KU Wind Ensemble organizes for Douglas County CASA.

Summary

At its May 2017 meeting, the Board reviewed its policy on credit hour requirements for baccalaureate degree programs to determine if it met best practices for on-time completion and found at that time that 67 percent of baccalaureate programs required 124-semester credit hours or more, while 33 perent required 120-semester credit hours. To meet best practices for on-time completion, state universities subsequently took steps to increase the percentage of baccalaureate degree programs requiring 120 credit hours and to reduce the percentage of baccalaureate degree programs exceeding 120 credit hours.

The Board approved eight percent of state university baccalaureate programs to exceed 120 credit hours at its November 2018 meeting. At that time, the Bachelor of Science in Engineering Physics was inadvertently left off the list of programs for which the University of Kansas (KU) sought Board approval to exceed 120 hours. As such, KU is now requesting approval.

June 18, 2024

Background

The Board's policy on the number of credit hours required to complete a baccalaureate degree has varied from 120 to 124 credit hours. In November 2001, the Board of Regents reaffirmed that the baccalaureate degree definition included "courses totaling a minimum of 120 semester credit hours." In May of 2002, the Board raised the minimum required number of credit hours for a baccalaureate degree from 120 to 124. This increase was reversed to a minimum of 120 credit hours by the Board in October of 2010, which made Kansas' requirements consistent with most other states.

At its May 2017 meeting, the Board reviewed its policy on credit hour requirements for baccalaureate degree programs to determine if it met best practices for on-time completion and found at that time 33 percent of baccalaureate programs required 120 semester credit hours, 50 percent required 124-semester credit hours, and 17 percent exceeded 124-semester credit hours. This review was in fulfillment of the Board's AY 2017 goal to determine if the policy meets best practices for promoting on-time completion.

To meet best practices for on-time completion, state universities subsequently took steps to increase the percentage of baccalaureate degree programs requiring 120 credit hours from 33 percent to 92 percent, and to reduce the percentage of baccalaureate degree programs exceeding 120 credit hours from 67 percent to eight percent. The Board approved eight percent of state university baccalaureate programs to exceed 120 credit hours at its November 2018 meeting.

Request

At the time this work was being done, the Bachelor of Science in Physics program at KU was inadvertently left off the list of programs for which institutions requested Board approval to exceed 120 hours. As such, the University is requesting approval to offer the program at 124.5 to 126.5 hours, depending on each of the four concentrations. Degree plans for each of the concentrations are included after KU's memo outlining the request.

KU believes requiring the additional credit hours is justified because of KBOR systemwide general education requirements and Accreditation Board for Engineering and Technology (ABET) accreditation requirements This rationale is explained in KU's memo, which immediately follows this paper.

Recommendation

Currently, 43 programs at the state universities are approved to exceed 120 hours, which is about 8.4 percent of all undergraduate programs. Adding one more would increase the percentage to 8.6 percent of all programs. Staff recommends approval of KU's request for its Bachelor of Science in Engineering Physics to exceed 120 credit hours.

THE UNIVERSITY OF KANSAS
Office of the Provost

TO: Board Academic Affairs Standing Committee
Kansas Board of Regents

FROM: Barbara A. Bichelmeyer
Provost & Executive Vice Chancellor

DATE: June 3, 2024

RE: Request for BS in Engineering Physics to Exceed 120 Credit Hours

During the 2017-2018 Academic Year, KU requested the following ABET-accredited programs housed in the School of Engineering to exceed 120 credit hours: computer engineering, electrical engineering, mechanical engineering, aerospace engineering, architectural engineering, chemical engineering, civil engineering, petroleum engineering, computer science, information technology, and applied computing. The Kansas Board of Regents granted the request at its November 2018 meeting.

The BS in Engineering Physics was inadvertently omitted from the AY 2017-2018 request to KBOR and KU is seeking approval to offer this ABET-accredit degree at 124.5-126.5 credit hours. There are only 22 ABET-accredited Engineering Physics programs in the United States and one in Peru; KU has the sole program in the state. In reviewing public universities with high-research profiles, we find the University of Oklahoma offers the degree at 129 credit hours and the Colorado School of the Mines offers the degree at 130 credit hours.

Because of general education requirements, and requirements of the ABET Engineering Accreditation Commission, the number of credit hours (124.5-126.5) for Engineering Physics reflects the minimum requirements needed to complete the degree. Relevant standards include Criterion 5 and Criterion 3, which are detailed below.

- Criterion 5 Curriculum
  a. *a minimum of 30 semester credit hours (or equivalent) of a combination of college-level mathematics and basic sciences with experimental experience appropriate to the program.*
  b. *a minimum of 45 semester credit hours (or equivalent) of engineering topics appropriate to the program, consisting of engineering and computer sciences and engineering design, and utilizing modern engineering tools.*
  c. *a broad education component that complements the technical content of the curriculum and is consistent with the program educational objectives.*
  d. *a culminating major engineering design experience that 1) incorporates appropriate engineering standards and multiple constraints, and 2) is based on the knowledge and skills acquired in earlier course work.*

- Criterion 3 Student Outcomes and include the following:
  1. *an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.*

Strong Hall | 1450 Jayhawk Blvd. Room 250 | Lawrence, KS 66045-7518 | USA
+1 785-864-4904 | Fax +1 785-864-4463 | provost@ku.edu | http://provost.ku.edu

2. *an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.*
3. *an ability to communicate effectively with a range of audiences.*
4. *an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.*
5. *an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.*
6. *an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.*
7. *an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.*

In addition, ABET-accredited Engineering Physics programs are globally recognized through the Washington Accord and through the Engineers Canada Bilateral MRA.ABET indicates the Washington Accord is "a mutual recognition agreement (MRA) which pertains to engineering programs accredited by its signatories in their jurisdictions since 1989. Signatories to the Washington Accord are organizations responsible for accrediting engineering programs in Australia, Canada, Chinese Taipei, Hong Kong, Ireland, Japan, Korea, Malaysia, New Zealand, Singapore, South Africa, Turkey, the United Kingdom, and the United States. The Washington Accord assists in determining if an engineering program in one signatory's jurisdiction is recognized for purposes of licensure and registration, employment, or admission to graduate school in another jurisdiction."

KU's program is also part of the Engineers Canada Bilateral MRA which ABET indicates "recognize(s) the substantial equivalence of mature accreditation systems and programs accredited by signatory organizations within their jurisdictions. Signatories of MRAs agree that the graduates of programs accredited by the accord's signatories are prepared to begin practice of the profession at the entry-level."

Given the general education requirements, the ABET-accreditation requirements, the global-recognition of the degree, the fact that similarly-situated institutions offer the same degree in excess of 120 credit hours, and that KBOR in 2018 approved all Engineering programs in the state to exceed 120 credit hours, we are confident this request is appropriate.

Year 1: Fall **Engineering Physics – Aerospace Systems** (updated 6/3/24)

Course #	Course Name	SCH #
PHSX 150	Seminar in Phys., Astro, and Eng Physics	.5
AE 245	Intro to Aerospace Engineering	3
MATH 125	Calculus I KBOR Core Math & Stats Discipline Area	4
CHEM 130 or 150	General Chemistry I	5
	KBOR Core English Discipline Area	3
		15.5

Year 1: Spring

Course #	Course Name	SCH #
PHSX 210/216	General Physics I for Engineers & Lab KBOR Core Natural & Physical Sciences Discipline Area	4
AE 211 or EECS 138	Computing for Engineers OR Introduction to Computing	3
MATH 126	Calculus II	4
MATH 290	Linear Algebra	2
	KBOR Core English Discipline Area	3
		16

Year 2: Fall

Course #	Course Name	SCH #
AE 345	Fluid Mechanics	3
CE 260	Statics & Dynamics	5
MATH 127	Calculus III	4
MATH 220 or MATH 330	Applied Differential Equations or Elementary Differential Equations	3
		15

Year 2: Spring

Course #	Course Name	SCH #
PHSX 212/236	General Physics II & Lab	4
AE 445	Aircraft Aerodyn. & Perform	3
C&PE 221 or ME 212	Chemical Engineering Thermodynamics or Basic Engineering Thermodynamics	3
CE 310	Strength of Materials	4
	KBOR Core Arts & Humanities Discipline Area	3
		16

Year 3: Fall

Course #	Course Name	SCH #

EPHX 521	Mechanics I	3
AE 507	Aerospace Structures I	3
AE 545	Fundamentals of Aerodynamics	3
AE 550	Dynamics of Flight I	3
	KBOR Core Communications Discipline Area	3
		15

Year 3: Spring

Course #	Course Name	SCH #
AE 421	Aero Computer Graphics	3
AE 551	Dynamics of Flight II	3
AE 572	Fund. Of Jet Propulsion	3
PHSX 313/316	General Physics III & Lab	4
	KBOR Core Arts & Humanities Discipline Area	3
		16

Year 4: Fall

Course #	Course Name	SCH #
EPHX 531	Electricity & Magnetism	3
EPHX 536 or 616	Electronic Circuit Measurement & Design or Physical Measurements	4
AE 521 or AE 520	Aero Sys Design I or Space Sys Design I	4
	KBOR Core Institutionally Designated Area	3
	KBOR Core Social & Behavioral Sciences Discipline Area	3
		17

Year 4: Spring

Course #	Course Name	SCH #
EPHX 601	Design Phys. & Elect. Systems	4
AE 508 or AE 523	Aerospace Structures II or Space System Design II	3
EPHX 611	Introductory Quantum Mechanics	3
	KBOR Core Institutionally Designated Area	3
	KBOR Core Social & Behavioral Sciences Discipline Area	3
		16

Total Number of Semester Credit Hours.....**126.5**

Year 1: Fall **Engineering Physics – Chemical Systems** **(updated 6.3.24)**

Course #	Course Name	SCH #
PHSX 150	Seminar in Phys., Astro, and Eng Physics	.5
CHEM 130 or CHEM 170	General Chemistry I or Chemistry for the Chemical Sciences	5
MATH 125	Calculus I KBOR Core Math & Stats Discipline Area	4
	KBOR Core English Discipline Area	3
	KBOR Core Communications Discipline Area	3
		15.5

Year 1: Spring

Course #	Course Name	SCH #
PHSX 211 or EPHX 210 plus PHSX 216	General Physics I or General Physics I for Engineers & Lab KBOR Core Natural & Physical Sciences Discipline Area	4
CHEM 135 or CHEM 175	General Chemistry II or Chemistry for the Chemical Sciences II	5
MATH 126	Calculus II	4
	KBOR Core English Discipline Area	3
		16

Year 2: Fall

Course #	Course Name	SCH #
PHSX 212/236	General Physics II & Lab	4
MATH 127	Calculus III	4
MATH 290	Linear Algebra	2
CHEM 330	Organic Chemistry I	3
C&PE 211	Material & Energy Balance	3
		16

Year 2: Spring

Course #	Course Name	SCH #
PHSX 313/316	General Physics III & Lab	4
MATH 220 or MATH 320	Applied Differential Equations or Elementary Differential Equations	3
C&PE 221	Basic Engineering Thermodynamics	3
C&PE 325	Numerical Methods	3
	KBOR Core Social & Behavioral Sciences Discipline Area	3
		16

Year 3: Fall

Course #	Course Name	SCH #
EPHX 521	Mechanics I	3
CHEM 525	Physical Chemistry for Engineers	4
C&PE 511	Momentum Transfer	3
C&PE 512	Chem Engr Thermo II	3
	KBOR Core Arts & Humanities Discipline Area	3

		16

Year 3: Spring

Course #	Course Name	SCH #
EPHX 611	Intro. Quantum Mechanics	3
C&PE 524	Kinetics & Reactor Design	3
C&PE 525	Heat & Mass Transfer	4
	KBOR Core Social & Behavioral Sciences Discipline Area	3
	KBOR Core Arts & Humanities Discipline Area	3
		16

Year 4: Fall

Course #	Course Name	SCH #
EPHX 531	Electricity & Magnetism	3
C&PE 611	Design of Unit Operations	3
C&PE 615	Int. Proc. Dyn & Cnt.	3
C&PE 616	Chem. Eng. Lab I	3
	KBOR Core Institutionally Designated Area	3
		15

Year 4: Spring

Course #	Course Name	SCH #
EPHX 601	Dsgn. Phys. & Elect. Systems	4
C&PE 522	Econ Apprais C&PE Project	2
C&PE 613	Chem Eng. Design	3
C&PE 626	Chem. Eng. Lab II	4
	KBOR Core Institutionally Designated Area	3
		16

Total Number of Semester Credit Hours..... 126.5

Year 1: Fall **Engineering Physics – Digital Electronic Systems** **(updated 6/5/24)**

Course #	Course Name	SCH #
PHSX 150	Seminar in Phys., Astro, and Eng Physics	.5
MATH 125	Calculus I KBOR Core Math & Stats Discipline Area	4
	KBOR Core English Discipline Area	3
	KBOR Core Communications Discipline Area	3
	KBOR Core Social & Behavioral Sciences Discipline Area	3
	KBOR Core Arts & Humanities Discipline Area	3
		16.5

Year 1: Spring

Course #	Course Name	SCH #
PHSX 211 or EPHX 210/216	General Physics I or General Physics I for Engineers & Lab KBOR Core Natural & Physical Sciences Discipline Area	4
MATH 126	Calculus II	4
EECS 168	Programming I	4
	KBOR Core English Discipline Area	3
		15

Year 2: Fall

Course #	Course Name	SCH #
MATH 127	Calculus III	4
MATH 220	Applied Differential Equations	3
MATH 290	Elementary Linear Algebra	2
EECS 202	Circuit I	4
	KBOR Core Social & Behavioral Sciences Discipline Area	3
		16

Year 2: Spring

Course #	Course Name	SCH #
PHSX 212/236	General Physics II & Lab	4
EECS 140	Intro to Digital Logic Design	4
EECS 212	Circuits II	4
EECS 268	Programming II	4
		16

Year 3: Fall

Course #	Course Name	SCH #
EPHX 521	Mechanics I	3
EECS 361	Signal & System Analysis	3
EECS 312	Electronic Circuits I	3
EECS 388	Embedded Systems	4

	KBOR Core Arts & Humanities Discipline Area	3
		16

Year 3: Spring

Course #	Course Name	SCH #
MATH 526	Applied Mathematical Statistics	3
EECS 348	Software Engineering I	4
EECS 443	Digital Systems Design	4
PHSX 313/316	General Physics III & Lab	4
		15

Year 4: Fall

Course #	Course Name	SCH #
EPHX 531	Electricity & Magnetism	3
	ENGR/PHSX Elective (400 level or higher)	3
EECS 470	Electronic Devices & Properties of Materials	3
EECS 541	Comp. Syst. Design Lab I	3
	KBOR Core Institutionally Designated Area	3
		15

Year 4: Spring

Course #	Course Name	SCH #
EPHX 601	Dsgn. Phys. & Elect. Systems	4
EECS 542	Comp. Syst. Design Lab II	3
EECS 645	Computer Architecture	3
EPHX 611	Intro. Quantum Mechanics	3
	KBOR Core Institutionally Designated Area	3
		16

Total Number of Semester Credit Hours..... 125.5

Year 1: Fall **Engineering Physics – Electromechanical Control Systems** (updated 6/3/24)

Course #	Course Name	SCH #
PHSX 150	Seminar in Phys., Astro, and Eng Physics	.5
ME 228	Computer Graphics	3
MATH 125	Calculus I KBOR Core Math & Stats Discipline Area	4
	KBOR Core English Discipline Area	3
	KBOR Core Communications Discipline Area	3
	KBOR Core Social & Behavioral Sciences Discipline Area	3
		16.5

Year 1: Spring

Course #	Course Name	SCH #
PHSX 211 or EPHX 210 /216	General Physics I or General Physics I for Engineers & Lab KBOR Core Natural & Physical Sciences Discipline Area	4
MATH 126	Calculus II	4
EECS 168	Programming I	4
EECS 140	Intro to Digital Logic Design	4
		16

Year 2: Fall

Course #	Course Name	SCH #
MATH 220	Differential Equations	3
MATH 127	Calculus III	4
MATH 290	Linear Algebra	2
EECS 202	Circuit I	4
	KBOR Core English Discipline Area	3
		16

Year 2: Spring

Course #	Course Name	SCH #
PHSX 212/236	General Physics II & Lab	4
	KBOR Core Arts & Humanities Discipline Area	3
EECS 212	Circuits II	4
EECS 268	Programming II	4
ME 210	Introduction to Mechanics	1
		16

Year 3: Fall

Course #	Course Name	SCH #
EPHX 521	Mechanics I	3
EECS 361	Signal & System Analysis	3
ME 311	Mechanics of Materials	3
ME 212	Basic Engineering Thermo	3

	KBOR Core Social & Behavioral Sciences Discipline Area	3
		15

Year 3: Spring

Course #	Course Name	SCH #
PHSX 313/316	General Physics III & Lab	3
EECS 312	Electronic Circuits I	3
ME 501	Mech. Eng. Design Process	2
ME 628	Mechanical Design	3
	KBOR Core Arts & Humanities Discipline Area	3
		15

Year 4: Fall

Course #	Course Name	SCH #
EPHX 531	Electricity & Magnetism	3
	ENGR/PHSX Elective (500 level or higher) – switch to Spring if you choose ME 682	3
ME 640 or ME 627	Design Project or Automotive Design	2-3
EPHX 616 or ME 455	Physical Measurements or Mechanical Engineering Measurements and Experimentation	4
	KBOR Core Institutionally Designated Area	3
		15-16

Year 4: Spring

Course #	Course Name	SCH #
EPHX 611	Introductory Quantum Mechanics	3
EPHX 601	Dsgn. Phys. & Elect. Systems	4
ME 641, 642, or 643	Design Project A, B, or C	2-3
EECS 444 or ME 682	Sys Dyn & Cntl Sys or Control Systems	3
	KBOR Core Institutionally Designated Area	3
		15-16

Total Number of Semester Credit Hours..... 124.5-126.5