KANSAS BOARD OF REGENTS ACADEMIC AFFAIRS STANDING COMMITTEE

VIRTUAL MEETING AGENDA Tuesday, January 4, 2022 9:00 – 10:30 a.m.

The Board Academic Affairs Standing Committee (BAASC) will meet virtually via Zoom. Meeting information will be sent to participants via email, or you may contact arobinson@ksbor.org.

| I. | Cal | l to Order | Regent Kiblinger, Chair | |
|------|-----|--|-------------------------|-------|
| | А. | Roll Call and Introductions | | |
| | В. | Approve minutes from December 15, 2021 meeting | | p. 3 |
| II. | Сог | isent Items | | |
| | А. | BS/BAS in Project Management – KU | Barbara Bichelmeyer | p. 5 |
| | В. | M.Eng. in Electrical Engineering & Computer Science – KU | Barbara Bichelmeyer | p. 17 |
| III. | Dis | cussion Items | | |
| | A. | Tenure Track Extension | Daniel Archer | p. 31 |
| IV. | Sug | gested Agenda Items for January 19 th Meeting | | |
| | Α. | Approve AY 2020 Performance Reports, and Review | | |
| | | Cases for 100% funding | | |
| | B. | AAS in Unmanned Aircraft Systems | | |

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:

Shelly Kiblinger, Chair

Jon Rolph

Allen Schmidt

Wint Winter

Board Academic Affairs Standing Committee

AY 2022 Meeting Schedule

| BAASC Academic Year 2021- 2022 Meeting Dates | | | | | |
|--|-------------------------|------------|----------------------|--|--|
| Meeting Dates | Location | Time | Agenda Materials Due | | |
| August 31, 2021 | Virtual Meeting | 9:00 a.m. | August 10, 2021 | | |
| September 15, 2021 | Hybrid Meeting | 1:30 p.m. | August 25, 2021 | | |
| | *No Meetings in October | | | | |
| November 2, 2021 | Virtual Meeting | 9:00 a.m. | October 12, 2021 | | |
| November 17, 2021 | Hybrid Meeting | 10:30 a.m. | October 27, 2021 | | |
| November 29, 2021 | Virtual Meeting | 9:00 a.m. | November 9, 2021 | | |
| December 15, 2021 | Hybrid Meeting | 11:00 a.m. | November 24, 2021 | | |
| January 4, 2022 | Virtual Meeting | 9:00 a.m. | December 14, 2021 | | |
| January 19, 2022 | Topeka | 11:00 a.m. | December 29, 2021 | | |
| February 1, 2022 | Virtual Meeting | 9:00 a.m. | January 11, 2022 | | |
| February 16, 2022 | Topeka | 11:00 a.m. | January 26, 2022 | | |
| March 1, 2022 | Virtual Meeting | 9:00 a.m. | February 8, 2022 | | |
| March 16, 2022 | Topeka | 11:00 a.m. | February 23, 2022 | | |
| April 5, 2022 | Virtual Meeting | 9:00 a.m. | March 15, 2022 | | |
| April 20, 2022 | FHSU | 11:00 a.m. | March 30, 2022 | | |
| May 3, 2022 | Virtual Meeting | 9:00 a.m. | April 12, 2022 | | |
| May 18, 2022 | Topeka | 11:00 a.m. | April 27, 2022 | | |
| May 31, 2022 | Virtual Meeting | 9:00 a.m. | May 10, 2022 | | |
| June 15, 2022 | Topeka | 11:00 a.m. | May 25, 2022 | | |

*Please note virtual meeting times have changed to <u>9 a.m.</u>, and Board day meetings have changed to <u>11 a.m.</u>, unless otherwise noted.

Board Academic Affairs Standing Committee MINUTES

Wednesday, December 15, 2021

The December 15, 2021 meeting of the Board Academic Affairs Standing Committee (BAASC) of the Kansas Board of Regents (KBOR) was called to order by Regent Kiblinger at 11:00 a.m. The meeting was held in person and through Zoom.

In Attendance:

| Members: | Regent Kiblinger Regent Winter | Regent Rolph | Regent Schmidt |
|----------|-----------------------------------|------------------------------|----------------------------------|
| Staff: | Daniel Archer Amy Robinson | Sam Christy-Dangermond | Karla Wiscombe Lisa Beck |
| | Marti Leisinger | Travis White | April Henry |
| Others: | Aron Potter, Coffeyville CC | Brenda Koerner, ESU | Barbara Bichelmeyer, KU |
| | Cindy Hoss, Hutchinson CC | Elaine Simmons, Barton CC | Gary Wyatt, ESU |
| | George Arasimowicz, ESU | Howard Smith, PSU | Janet Stramel, FHSU |
| | Jason Sharp, Labette CC | Jean Redeker, KU | Jennifer Roberts, KU |
| | Kay Monk-Morgan, WSU | Kim Morse, Washburn | JuliAnn Mazachek, Washburn |
| | Linnea GlenMaye, WSU | Laura Loyacono, KSCAC | Kim Zant, Cloud County CC |
| | Lucy Steyer, ESU | Luke Dowell, SCCC | Michelle Schoon, Cowley CC |
| | Meaghan Higgins, KSCAC | Monette DePew, Pratt CC | Remy Lequesne, KU |
| | Robert Klein, KUMC | Tanya Gonzalez, KSU | Taylor Crawshaw, Independence CC |
| | Tom Nevill, Butler CC | Jane Holwerda, Dodge City CC | · 1 |

Roll call was taken for members and presenters.

Approval of Minutes

Regent Rolph moved to approve the November 29, 2021 meeting minutes, and Regent Schmidt seconded the motion. With no corrections, the motion passed.

Other Matters

Regent Schmidt moved to switch items A and B under Other Matters, and Regent Rolph seconded. The motion passed.

• Sam Christy Dangermond presented the Annual Report on Exceptions to the Minimum Admission Standards at State Universities. K.S.A. 76-717 requires the Kansas Board of Regents to report on the number and percentage of students admitted to state universities who did not meet minimum requirements but were accepted by exception. This report includes freshman and transfer students admitted for Academic Year 2021. Sam reviewed the requirements for both groups of students and noted this is the last year these requirements will be utilized due to changes in Qualified Admissions. She summarized the data, which starts on page 7 of the agenda.

In summary, the only category in which a university exceeded the maximum number of allowable exceptions was the non-resident freshman category. However, with the Qualified Admissions requirements changing, effective for the 2021-2022 AY and beyond, staff do not anticipate issues with the number of exceptions for subsequent years. The report will be sent to the Legislature in January to meet the reporting

requirements set forth in K.S.A. 76-717.

• Tara Lebar, Meaghan Higgins, and Laura Loyacono presented an overview of the Kansas State College Advising Corps (KSCAC). KSCAC is one of more than 30 chapters in the U.S. working to increase the number of low-income, first-generation, and underrepresented high school students who enter and complete higher education.

The KSCAC hires recent college graduates to serve as full-time college advisors in high schools. These advisors:

- Provide guidance, advisement, and group or individualized support with college and career planning
- Conduct application & financial aid workshops, facilitate campus tours and connect families with resources
- Walk students through financial aid, scholarship opportunities, and FAFSA application
- Help students find a "best-fit" post-secondary opportunity to increase the likelihood of persistence and completion rates
- Create and foster a college-going culture that engages, encourages, and supports college attendance and completion

Information can be found at <u>https://linktr.ee/kscac</u>. It should be noted that while this chapter is housed at the K-State campus, KSCAC advisors do not recruit for KSU. Their efforts are student focused, helping to find a "best fit" post-secondary plan which could include university, community college, technical college, military or employment. It will require participation from all KBOR institutions for statewide expansion of the program. Additional questions can be directed to Tara Lebar, <u>tlebar@ksbor.org</u>.

- Regent Kiblinger provided an Advantage KS Coordinating Council (AKCC) update. The Council has submitted a budget request with the Governor. Their plan is complete, and documents can be obtained by contacting Regent Kiblinger.
- Regent Schmidt provided a Direct Support Professionals (DSP) update. He noted \$500,000 was granted for DSP apprenticeship initiatives. He is also hearing news of a \$50 million fund to increase DSP pay. Regent Schmidt will provide more information at a later meeting.

<u>Adjournment</u>

The next BAASC meeting is scheduled virtually for January 4, 2022, at 9:00 a.m.

Regent Rolph moved to adjourn the meeting, and Regent Winter seconded. With no further discussion, the meeting adjourned at 12:04 p.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. Board staff concurs with the Council of Presidents and the Council of Chief Academic Officers in recommending approval.

January 4, 2021

I. General Information

A. Institution University of Kansas

| B. Program Identification | |
|----------------------------------|---|
| Degree Level: | Bachelor's |
| Program Title: | Project Management |
| Degree to be Offered: | Bachelor of Science and Bachelor of Applied Science |
| Responsible Department or Unit: | School of Professional Studies at the KU Edwards Campus |
| CIP Code: | 52.0211 |
| Modality: | Online |
| Proposed Implementation Date: | Fall 2022 |

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 / Program Description

The School of Professional Studies (SPS) at the KU Edwards Campus in Overland Park proposes to create two new online undergraduate degrees, the Bachelor of Science and Bachelor of Applied Science in Project Management (BS/BAS in PM). The program is designed for undergraduate students with a strong interest in understanding how theory and practice work together to solve real-world problems in a variety of fields who have already earned an associate's degree or equivalent hours and are looking to complete the last two years necessary for a bachelor's degree.

The BS/BAS in PM degree will be a Johnson County Education Research Triangle (JCERT) funded, 100% online completion degree for students transferring to KU Edwards. The PM program will provide students with the opportunity to provide the management knowledge and performance competencies which can be used by graduates from all disciplines involved in managing projects. Students will be able to partner the PM foundation with additional focus areas such as information technology management, construction management, health information management, railroad operations, or other areas of interest to focus their education on their desired career path.

According to the Project Management Institute (PMI), organizations and companies across sectors and geographic borders steadily embrace project management. It is a growing profession, on track to gain nearly 2.2 million new jobs globally each year through 2027. Its significant and sustained growth is driving an increasing demand for colleges and universities to offer courses and degree programs in project management.

Driven by globalization, evolving technology, and rapid automation of work processes, all types of organizations are placing growing emphasis on project-based planning, development, and even operations, to gain a competitive advantage. Organizations recognize an expanding pool of project management specialists is crucial, and regional workforce development should meet this growing need.

With the KU Edwards campus offering baccalaureate degree completion programs, KU-Edwards anticipates students interested in pursuing the BS/BAS in PM to come primarily from community college partners in the KC metro area, including Johnson County Community College (JCCC), Kansas City Kansas Community College, and the Metropolitan Community College – Kansas City in Missouri. As KU-Edwards does not offer lower-division undergraduate (freshman-sophomore) courses, KU Edwards staff and faculty have worked with staff and faculty at metro area two-year colleges, primarily JCCC to align course offering and content with KU requirements and needs for seamless transfer of credit and progression from JCCC to Edwards. However, since the program is being offered online, it is recognized that students could come from community colleges across Kansas, and even nationwide. KU-Edwards staff and faculty will also work with the other community colleges across Kansas to promote the program and to align course offering and content with KU requirements and needs for transfer of credit and progression to this Edwards program.

In addition, by offering both a Bachelor of Science and a Bachelor of Applied Science in Project Management, KU-Edwards is are able to offer additional flexibility to students transferring into the program as well as ensuring that the degree meets the student needs.

IV. Program Demand:

Market Analysis

The global economy has become more project-oriented, as the practice of project management expands within industries that were traditionally less project-oriented, such as health care, publishing and professional services. As a result of this shift, employers will need 87.7 million individuals working in project management oriented roles by 2027. Anderson Economic Group (AEG) and PMI analyzed project-oriented employment opportunity in 11 countries on five continents that represent developed and/or growing economic powers and concluded that project-related job growth is expected to be 33% collectively.

From 2017-2027, leading project management sectors are expecting significate job openings such as 9.7 million in manufacturing/construction, 5.5 million in information services/publishing, 4.6 million in finance/insurance, 1.7 million in management/professional services, 279,000 in utilities, and 49,000 in oil/gas. The US healthcare sector alone has seen the largest increase in project-oriented jobs, with 17% growth.

In addition, the 2008 analysis by PMI found that project management-oriented industries are a large and growing sector and failure to prepare future practitioners could result in hundreds of billions in lost economic output. A 2012 analysis showed similar results and found that future demand for project managers was growing faster than demand for workers in other occupations. This analysis also estimated that project-related jobs would number 52.4 million by 2020. By early 2017, the number of project management jobs had already reached almost 66 million, exceeding that original projection.

With this dramatic increase in project management roles and high attrition rates due to a retiring workforce, training new professionals in the project management field is crucial. This shortage of qualified talent poses a notable risk for organizations that rely on that talent to implement strategic initiatives, drive change and deliver innovation. This talent gap could result in a potential loss of over \$207.9 billion in GDP through 2027 for the 11 countries analyzed, which include the United States, Canada, China, Japan, India, and United Kingdom to name a few.

KU's School of Professional Studies currently offers project management at the graduate level, but in order to help meet employer and industry demands, KU would like to expand our offerings to include a BS and BAS in PM. According to the Global Accreditation Center for Project Management Education Programs (GAC), there are 24 accredited bachelors programs and 15 of those are within the US. Those 15 programs are split between in person, hybrid and online formats with some having specific focus on business or information technology. KU will differentiate itself from these programs due to its connection with KU and the School of Professional Studies. The BS/BAS in PM will be one of the only GAC accredited programs offered at a R1 institution and the BAS program will be one of two accredited BAS programs. At its March 2021 meeting, the Board approved the School of Professional Studies to pursue GAC accreditation for the MS/ME in Project Management. There is no additional cost for adding the BS/BAS to the request to GAC accreditation and the program will hold on seeking accreditation until the BS/BAS development is complete.

By offering the program through the School of Professional Studies, KU is able to ensure an interdisciplinary approach to project management, which will allow students to explore a variety of emphasis areas and ensure that students have a broad approach to PM. Additionally, by offering the BS/BAS in PM program online, SPS is able to make this KU degree accessible to students across the state as well as nationwide. The Bachelor of Science (BS) option includes a BS core that provides solid preparation in math, science, and information systems as well as accounting and economics for students who wish to be project managers in technical fields or apply to graduate programs in those areas. The Bachelor of Applied Science (BAS) allows more flexibility and applied considerations, including room for a full minor in any field to be paired with the project management major and area of emphasis.

| Year | Headcou | unt Per Year | Sem Credit Hrs Per Year | | |
|----------------|------------|--------------|-------------------------|------------|--|
| | Full- Time | Part- Time | Full- Time | Part- Time | |
| Implementation | 10 | 0 | 300 | 0 | |
| Year 2 | 10 | 10 | 600 | 150 | |
| Year 3 | 20 | 15 | 900 | 375 | |

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

VI. Employment

By 2027, employers will need 87.7 million individuals working in project management oriented roles. With a dramatic increase in project management roles and high attrition rates due to a retiring workforce, training new professionals in the project management field is crucial. From 2017-2027, leading project management sectors are expecting significate job openings such as 9.7 million in Manufacturing/Construction, 5.5 million in Information Services/Publishing, 4.6 million in Finance/Insurance, 1.7 million in Management/Professional Services, 279,000 in Utilities, and 49,000 in Oil/Gas.

Nationally, project management positions have a mean salary of \$80,220 with the rate of growth dependent on the sector. Advertising, promotions, and marketing project managers are expected to see 8% growth over the next 10 years, while those in construction, information technology, and financial project management are expected to see growth ranging from 10-16%.

Additionally, in the U.S. in 2017, wages of project management-oriented workers in projected industries were far higher on average than wages of non-project-oriented professionals—a premium of 82%. On a global basis, certification also bolsters salary levels as shown in *Earning Power: Project Management Salary Survey*. The ninth edition of PMI's biennial report found that, among those surveyed, salaries of practitioners with the Project Management Professional (PMP)® certification are 20 % higher on average than those without a PMP®. With an expected increase in jobs, competitive salaries and the chance to make a difference, the future is bright

for project professionals.

In the Metro Kansas City region, according to the US Bureau of Labor's 2019 Metropolitan and Nonmetropolitan Area Occupational Employment report, the mean salary for project management related occupations is between \$110,340 and \$148,880 depending on the sector of employment.

VII. Admission and Curriculum

A. Admission Criteria

Students must apply to KU Edwards and be admitted by the School of Professional Studies. Prior to entering the program, students must complete two (2) years of undergraduate college course work with a total of 60 semester credit hours and a cumulative GPA of at least 2.0.

B. Curriculum

The proposed BS/BAS in PM program is unique because it allows students to gain a thorough understanding of project management principles, while also focusing coursework in a variety of specializations such as health Informatics/healthcare, hospitality management, information technology, construction management, etc. The flexible curriculum of this program allows students to create an academic experience consistent with their career goals.

Since KU Edwards does not offer freshman-sophomore level courses the BS/BAS in PMGT is designed as an online degree completion program. Students are expected to complete the first two years at another campus, whether that be at one of our metro partners such as JCCC, MCC, or KCKCC or elsewhere. Courses for Year 1 and 2 listed below are KU courses for which students will transfer in equivalent courses. A full list of requirements can be found in Attachment A.

| Year 1: Fall | SCH = Sen | nester Credit Hours |
|--------------|---|---------------------|
| Course # | Course Name | SCH: 14 |
| CHEM 130 | Foundations of Chemistry I (KU Core 3N) | 5 |
| MATH 101 | College Algebra (KU Core 1.2) | 3 |
| ENGL 101 | Composition (KU Core 2.1) | 3 |
| | Emphasis Area Course 1 | 3 |

Bachelor of Science in Project Management

Year 1: Spring

| Course # | Course Name | SCH: 15 |
|----------|--|---------|
| COMS 130 | Speaker-Audience Com (KU Core 2.2) | 3 |
| Core 3H | Arts and Humanities Course | 3 |
| ENGL 102 | Critical Reading and Writing (KU Core 2.1) | 3 |
| Core 1.1 | Critical Thinking Course | 3 |
| | Emphasis Area Course 2 | 3 |

Year 2: Fall

| Course # | Course Name | SCH: 16 |
|----------|------------------------|---------|
| MATH 115 | Calculus I | 3 |
| Core 4.1 | Human Diversity Course | 3 |

| ECON 142 | Principles of Microeconomics (KU Core 3S) | 4 |
|----------|---|---|
| | Emphasis Area Course 3 | 3 |
| | Emphasis Area Course 4 | 3 |

Year 2: Spring

| Course # | Course Name | SCH: 15 |
|----------|---------------------------------------|---------|
| ACCT 200 | Financial Accounting | 3 |
| IST 205 | Survey of Information Systems | 3 |
| Core 4.2 | Culture, Diversity & Global Awareness | 3 |
| | Emphasis Area Course 5 | 3 |
| | Emphasis Area Course 6 | 3 |

Year 3 and 4 courses are offered online at the KU Edwards campus.

| Year 3: Fall | L. L | |
|--------------|--|---------|
| Course # | Course Name | SCH: 15 |
| PMGT 305 | Foundations of Project Management | 3 |
| PMGT 310 | Project Communications | 3 |
| PMGT 320 | Introduction to Microsoft Project | 3 |
| MATH 365 | Statistics | 3 |
| | Emphasis Area Course 7 | 3 |

Year 3: Spring

| Course # | Course Name | SCH: 15 |
|----------|-----------------------------------|---------|
| PMGT 315 | Project Scheduling and Control | 3 |
| PMGT 325 | Effective Project Team Leadership | 3 |
| PMGT 335 | Project Stakeholder Engagement | 3 |
| PMGT | PM Elective 1 | 3 |
| | Elective/ Minor Course | 3 |

Year 4: Fall

| Course # | Course Name | SCH: 15 |
|----------|---|---------|
| PMGT 330 | Organizational Strategy & Project Initiation | 3 |
| PMGT 410 | Managing Project Success | 3 |
| PMGT 415 | Project Procurement and Supply Chain Management | 3 |
| PMGT | PM Elective 2 | 3 |
| | Elective/ Minor Course | 3 |

Year 4: Spring

| Course # | Course Name | SCH: 15 |
|----------|--|---------|
| PMGT 405 | Organizational & Project Risk Management | 3 |
| PMGT 420 | Emerging Trends in Project Management | 3 |
| Core 5.1 | Social Responsibility and Ethics | 3 |
| PMGT | PM Elective 3 | 3 |

| PMGT 599 | Project Management Capstone | | 3 |
|---------------------|-----------------------------|-------|---|
| Total Number | of Semester Credit Hours | [120] | |

Bachelor of Applied Science in Project Management

| Year 1: Fall | SCH = Semester Credit Hours | |
|--------------|-------------------------------|---------|
| Course # | Course Name | SCH: 15 |
| Core 3N | Natural Science Course | 3 |
| MATH 101 | College Algebra (KU Core 1.2) | 3 |
| ENGL 101 | Composition (KU Core 2.1) | 3 |
| | Emphasis Area Course 1 | 3 |
| | Elective/Minor | 3 |

Year 1: Spring

| Course # | Course Name | SCH: 15 |
|----------|--|---------|
| COMS 130 | Speaker-Audience Com (KU Core 2.2) | 3 |
| Core 3H | Arts and Humanities Course | 3 |
| ENGL 102 | Critical Reading and Writing (KU Core 2.1) | 3 |
| Core 1.1 | Critical Thinking Course | 3 |
| | Emphasis Area Course 2 | 3 |

Year 2: Fall

| Course # | Course Name | SCH: 15 |
|----------|------------------------|---------|
| Core 4.1 | Human Diversity Course | 3 |
| Core 3S | Social Sciences Course | 3 |
| | Emphasis Area Course 3 | 3 |
| | Emphasis Area Course 4 | 3 |
| | Elective/ Minor Course | 3 |

Year 2: Spring

| Course # | Course Name | SCH: 15 |
|----------|---------------------------------------|---------|
| MATH 365 | Statistics | 3 |
| Core 4.2 | Culture, Diversity & Global Awareness | 3 |
| | Emphasis Area Course 5 | 3 |
| | Emphasis Area Course 6 | 3 |
| | Emphasis Area Course 7 | 3 |

Year 3 and 4 courses are offered online at the KU Edwards campus.

Year 3: Fall

| Course # | Course Name | SCH: 15 |
|----------|-----------------------------------|---------|
| PMGT 305 | Foundations of Project Management | 3 |
| PMGT 310 | Project Communications | 3 |
| PMGT 320 | Introduction to Microsoft Project | 3 |

| Elective/ Minor Course | 3 |
|------------------------|---|
| Elective/ Minor Course | 3 |

Year 3: Spring

| Course # | Course Name | SCH: 15 |
|----------|-----------------------------------|---------|
| PMGT 315 | Project Scheduling and Control | 3 |
| PMGT 325 | Effective Project Team Leadership | 3 |
| PMGT | PM Elective 1 | 3 |
| PMGT 335 | Project Stakeholder Engagement | 3 |
| | Elective/ Minor Course | 3 |

Year 4: Fall

| Course # | Course Name | SCH: 15 |
|----------|---|---------|
| PMGT 330 | Organizational Strategy & Project Initiation | 3 |
| PMGT 410 | Managing Project Success | 3 |
| PMGT 415 | Project Procurement and Supply Chain Management | 3 |
| PMGT | PM Elective 2 | 3 |
| | Elective/ Minor Course | 3 |

Year 4: Spring

| Course # | Course Name | SCH: 15 |
|---------------------------------------|--|---------|
| PMGT 405 | Organizational & Project Risk Management | 3 |
| PMGT 420 | Emerging Trends in Project Management | 3 |
| Core 5.1 | Social Responsibility and Ethics | 3 |
| PMGT | PM Elective 3 | 3 |
| PMGT 599 | Project Management Capstone | 3 |
| Total Number of Semester Credit Hours | | |

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 |
|---|---|-------------------|------------------------|---|-------------------------------|
| John Bricklemyer* | Professor of the Practice/ Program Director | ME/MIM | N | Engineering Management/Project Management | .5 |
| Vacant Position: To Be Hired (FY 21) | Professor of Practice | Ph.D./MS | Ν | TBD | .5 |
| New Faculty: To Be Hired (Year 3) | Professor of Practice | Ph.D./MS | Ν | TBD | 1.0 |
| James Lourentzos | Lecturer | MBA | Ν | Financial Management | .25 |
| Ravi Baburajan | Lecturer | ME/MBA | N | Engineering Management/Business | .25 |

| Karina Addari | Lecturer | Ph.D. | N | Supply Chain Management | .25 |
|---------------|----------|-------|---|----------------------------|-----|
| | | | | Management | |

IX. Expenditure and Funding Sources (List amounts in dollars. Provide explanations as necessary.)

| A. EXPENDITURES | First FY | Second FY | Third FY |
|---|-----------|-----------|------------|
| Personnel – Reassigned or Existing Positions | | | |
| Faculty | \$52,000 | \$52,000 | \$52,000 |
| Administrators (other than instruction time) | \$40,500 | \$41,050 | \$41,611 |
| Graduate Assistants | | | |
| Support Staff for Administration (e.g., secretarial) | | | |
| Fringe Benefits (total for all groups) | \$18,500 | \$18,610 | \$18,722 |
| Other Personnel Costs | | | |
| Total Existing Personnel Costs – Reassigned or Existing | \$111,000 | \$111,660 | \$112,333 |
| Personnel – New Positions | | | |
| Faculty | \$60,000 | \$60,000 | \$ 150,000 |
| Administrators (other than instruction time) | | | |
| Graduate Assistants | | | |
| Support Staff for Administration (e.g., secretarial) | | | |
| Fringe Benefits (total for all groups) | \$17,713 | \$18,059 | \$36,422 |
| Other Personnel Costs | | | |
| Total Existing Personnel Costs – New Positions | \$77,713 | \$78,059 | \$186,422 |
| Start-up Costs - One-Time Expenses | | | |
| Library/learning resources | | | |
| Equipment/Technology | | | |
| Physical Facilities: Construction or Renovation | | | |
| Other- Online Course Development | \$15,000 | \$15,000 | |
| Total Start-up Costs | \$15,000 | \$15,000 | \$0 |
| Onerating Costs Desurring Expanses | | | |
| | | | |
| Supplies/Expenses | ¢500 | ¢500 | ¢500 |
| Library/learning resources | \$200 | \$200 | \$200 |
| Equipment/Technology | | | |
| Other | \$12,000 | \$13,000 | \$15 300 |
| | \$13,700 | \$13,900 | \$15,500 |
| Total Operating Costs | \$14,400 | \$14,400 | \$15,800 |
| | | | |
| GRAND TOTAL COSTS | \$218,113 | \$219,119 | \$314,555 |

| B. FUNDING SOURCES (projected as appropriate) | First FY (New) | Second FY (New) | Third FY (New) |
|---|-------------------|--------------------|-------------------|
| Tuition / State Funds | \$145 500 | \$262,750 | ¢618 275 |
| Student Fees | \$143,300 | \$303,730 \$0 | \$018,575 |
| Other Sources | \$70,113 | \$0 | \$0 |
| GRAND TOTAL FUNDING | \$215,613 | \$363,750 | \$618,375 |
| | | | |
| C. Projected Surplus/Deficit (+/-) (Grand Total Funding <i>minus</i> Grand Total Costs) | \$(2,500) | \$144,631 | \$303,820 |

X. Expenditures and Funding Sources Explanations

A. Expenditures Personnel – Reassigned or Existing Positions

The current program director for the MS/ME in Project Management program will also serve as the program director for the BS/BAS program. The program director's salary has been split between the MS/ME in Project Management program and the BS/BAS Project Management program at a rate of .50 and .50 and the BS/BAS will cover 50% of the salary and fringe. His appointment to the BS/BAS program will be split between teaching and administration at a .80/.20 split or \$52,000 for teaching and \$13,000 for administration. A current academic success coach will be assigned to work with the BS/BAS in PM program. The PM program will make up 50% of their student load and the PM program will fund 50% of salary and fringe.

Personnel – New Positions

The BS/BAS in PM program will be hiring a new full-time faculty member in the first year to teach in the program as well as help fill a current vacancy that is needed to be filled for the master's program. The new faculty member will be 100% teaching. The BS/BAS in PM program utilizes existing faculty and lecturer support from the MS/ME in Project Management. Although these faculty resources are currently available, overload pay or additional lecturer funding is being allocated. Due to anticipated student demand, an additional faculty member will be hired in the third year.

Start-up Costs – One-Time Expenses

In order to ensure a successful launch of the online program, SPS has designated \$15,000 for online course development for each of the first two years. These funds will provide faculty with additional resources to develop the courses needed for the program outside of their teaching loads.

Operating Costs – Recurring Expenses

All equipment, library, and supplies have been accounted for in the existing services provided to KU Edwards students and no additional cost will be associated with the program. The KU Edwards Campus is allocating \$500 each year for instructional resources, \$2,500 each year for recruitment efforts, and \$10,000 each year for marketing efforts. In addition, the program director will receive \$1,400 each year for professional development.

B. Revenue: Funding Sources

The BS/BAS in PM program is a Johnson County Education and Research Triangle* (JCERT) funded program. The program will be fully funded through JCERT funds and tuition revenue. No state funds will be utilized. JCERT funds will be used to help fund the program during the implementation year until the program is revenue generating and sustainable on tuition funds alone. BS/BAS in PM students will be charged an all-inclusive tuition rate of \$485 per credit hour to ensure that the program is affordable and accessible to all students, nationwide. The Edwards Campus Fee and Edwards Programs Course Fee will be backed out of the all-inclusive rate and allocated to the services that those fees support.

* The Johnson County Education Research Triangle (JCERT) is a unique partnership between Johnson County, the University of Kansas and Kansas State University. Its goal is to create economic stimulus and a higher quality of life through new facilities for research and educational opportunities. In November 2008, Johnson County voters invested in the county's future by voting for a 1/8-cent sales tax to fund JCERT initiatives, including development of the National Food and Animal Health Institute at K-State Olathe; the KU Clinical Research Center in Fairway, Kansas; and here at KU Edwards, the BEST Building with several degree and certificate offerings in business, engineering, science and technology.

C. Projected Surplus/Deficit

Given the anticipated costs and revenue, the program is expected to run a deficit in the first year of implementation. JCERT funds will be used to help fund the program during the implementation year until the program is revenue generating and sustainable on tuition funds alone. With the current enrollment estimates, the BS/BAS in PM program is expected to have a revenue surplus. These funds will be utilizes to help improve the overall student experience and provide additional funding

XI. References

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Project Management Institute. (n.d.). Retrieved August 27, 2020, from https://www.pmi.org/

Project Management Job Growth and Talent Gap Report 2017-2027 (pp. 1-10, Rep.). (2017). Newton Square, PA: Project Management Institute.

U.S. Bureau of Labor Statistics. (2020, April 21). Retrieved from https://www.bls.gov/

Attachment A:

The proposed Bachelor of Science in Project Management is comprised of seven parts:

- KU Core Requirements: 24 credit hours
 - Core 1.1: Critical Thinking Course
 - Core 1.2: Quantitative Literacy Course: Fulfilled by BS Core
 - Core 2.1: Communication Course: ENGL 101 Composition
 - Core 2.1: Communication Course: ENGL 102 Critical Reading and Writing or BUS 305 Business Writing
 - Core 2.2: Communication Course: COMS 130 Speaker-Audience Communication
 - Core 3H: Arts and Humanities Course
 - Core 3N: Natural Sciences Course: Fulfilled by BS Core
 - Core 3S: Social Sciences Courses: Fulfilled by BS Core
 - Core 4.1: Human Diversity Course
 - Core 4.2: Global Culture/Awareness Course
 - Core 5.1: Social Responsibility and Ethics Course
 - Core 6: Integration and Creativity Course: *Fulfilled by Major*
- Bachelor of Science Core Courses: 24 Credits
 - MATH 101: College Algebra
 - MATH 115: Calculus I
 - MATH 365: Statistics
 - CHEM 130: Foundations of Chemistry I (or a physical science course with lab)
 - ACCT 200: Financial Accounting
 - IST 205: Survey of Information Systems
 - ECON 142 Principles of Microeconomics or ECON 144 Principles of Macroeconomics
 - Project Management Sequence Courses: 33 credit hours
 - PMGT 305: Foundations of Project Management
 - PMGT 310: Project Communications
 - PMGT 315: Project Scheduling and Control
 - PMGT 320: Introduction to Microsoft Project
 - PMGT 325: Effective Project Team Leadership
 - PMGT 405: Organizational & Project Risk Management
 - PMGT 330: Organizational Strategy & Project Initiation
 - PMGT 410: Managing Project Success
 - PMGT 415: Project Procurement and Supply Chain Management
 - PMGT 335: Project Stakeholder Engagement
 - PMGT 420: Emerging Trends in Project Management
- Emphasis Area Courses: 21 credit hours
 - Twenty-one (21) credit hours of emphasis area courses are to be completed at KU or transferred from another institution
- PMGT Elective Courses: 9 credit hours of the courses below
 - PMGT 425: Global Project Management
 - PMGT 510: Advanced Agile Approaches to Project Management
 - PMGT 430: Managing Virtual Project Teams
 - PMGT 520: Advanced Microsoft Project
- Electives or Minor Courses: 6 credit hours
 - Six (6) credit hours of upper-division courses (300+ level or above) are allocated for electives or to count towards a minor
 - Emphasis area course may be eligible to count towards Minor.

- Capstone
 - PMGT 599: Project Management Capstone (3 credit hours)

The proposed Bachelor of Applied Science in Project Management is comprised of six parts:

- KU Core Requirements: 33 credit hours
 - Core 1.1: Critical Thinking Course
 - Core 1.2: Quantitative Literacy Course: MATH 101: College Algebra
 - Core 2.1: Communication Course: ENGL 101 Composition
 - Core 2.1: Communication Course: ENGL 102 Critical Reading and Writing or BUS 305 Business Writing
 - Core 2.2: Communication Course: COMS 130 Speaker-Audience Communication
 - Core 3H: Arts and Humanities Course
 - Core 3N: Natural Science Course
 - Core 3S: Social Sciences Course
 - Core 4.1: Human Diversity Course
 - Core 4.2: Global Culture/Awareness Course
 - Core 5.1: Social Responsibility and Ethics Course
 - Core 6: Integration and Creativity Course: *Fulfilled by Major*
- BAS Project Management Sequence Courses: 36 credit hours
 - MATH 365: Statistics
 - PMGT 305: Foundations of Project Management
 - PMGT 310: Project Communications
 - PMGT 315: Project Scheduling and Control
 - PMGT 320: Introduction to Microsoft Project
 - PMGT 325: Effective Project Team Leadership
 - PMGT 405: Organizational & Project Risk Management
 - PMGT 330: Organizational Strategy & Project Initiation
 - PMGT 410: Managing Project Success
 - PMGT 415: Project Procurement and Supply Chain Management
 - PMGT 335: Project Stakeholder Engagement
 - PMGT 420: Emerging Trends in Project Management
- Emphasis Area Courses: 21 credit hours
 - Twenty-one (21) credit hours of emphasis area courses are to be completed at KU or transferred from another institution
- PMGT Elective Courses: 9 credit hours of the courses below
 - PMGT 425: Global Project Management
 - PMGT 510: Advanced Agile Approaches to Project Management
 - PMGT 430: Managing Virtual Project Teams
 - PMGT 520: Advanced Microsoft Project
- Upper-Division General Electives or Minor: 18 credit hours
 - Eighteen (18) credit hours of upper-division courses (300+ level or above) are allocated for electives or for a minor
 - Emphasis area course may be eligible to count towards Minor.
- Capstone
 - PMGT 599: Project Management Capstone (3 credit hours)

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. Board staff concurs with the Council of Presidents and the Council of Chief Academic Officers in recommending approval.

January 4, 2022

I. General Information

A. Institution

University of Kansas

| В. | Program Identification |
|----|------------------------|
| | Degree Level: |
| | Program Title: |

| Degree Level. | Muster 5 |
|---------------------------------|---|
| Program Title: | Electrical Engineering and Computer Science |
| Degree to be Offered: | Master of Engineering |
| Responsible Department or Unit: | School of Engineering |
| CIP Code: | 14.4701 |
| Modality: | Face-to-Face |
| Proposed Implementation Date: | Fall 2022 |
| | |

Master's

Total Number of Semester Credit Hours for the Degree: 31

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

III. Justification

The proposed degree program reflects the mission statement of KU and its commitment "to lift students and society by educating leaders, building healthy communities and making discoveries that change the world".

The justification for the new M.Eng. in EECS degree is to attract students and regional professionals whose focus is on working in industry and who are looking to further their education. A coursework-based master's degree will offer flexibility for professionals seeking a degree in the field in which they are employed and who may already be engaged in related workplace projects. The M.Eng. degree program will provide coursework directly related to the students' professional focus, without requiring non-course-based components that do not always fit well with this professional orientation. The current M.S. degree programs in the department of Electrical Engineering and Computer Science (EECS) require a project or research component, which is at times a substantial hurdle and deterrent for many people that want to further their education and are interested in a career in industry, but are unable to allocate the time and interest to develop the substantial project or research component, write the document and defend the work. The new M.Eng. degree option will remove this major barrier and encourage and enable more students and professionals to pursue a graduate degree program that is better aligned with their career goals.

The coursework-only M.Eng. in EECS degree will also be an efficient way for those who recently graduated with an EECS undergraduate degree to get more in-depth background and credentials in their fields of interest prior to seeking employment in industry. The degree will prepare students to be more effective in their careers as industry professionals and with entrepreneurship in a start-up company. The different degree title (Master's of

Engineering, M.Eng. in EECS) will help distinguish the coursework-only Master's students (graduates) from the Master's of Science (M.S.) students (graduates) who have completed a project/research as part of their degree.

Overall, the M.Eng. in EECS degree will provide additional options for students seeking advanced degrees that can better meet their learning and professional goals.

IV. Program Demand: Select one or both of the following to address student demand:

A. Survey of Student Interest

| Number of surveys administered: | 500 (430 UG + 70 Grad) |
|---|--------------------------|
| Number of completed surveys returned: | 88 (50 UG + 38 Grad) |
| Percentage of students interested in program: | 61.36% (35 UG + 19 Grad) |

Many current (undergraduate and graduate) students in the EECS department at KU have expressed immense interest in this proposed M.Eng. degree program. The department conducted a survey to determine student interest in this new program, which was sent to all junior and senior undergraduate and all M.S. graduate students in the department. 50 undergraduate students and 38 graduate students responded to the survey. We find from the survey that about 72% (36/50) of the undergraduate respondents were already interested in pursuing a graduate degree at KU.

Interestingly, our survey found that (Figure 1) of the 14 undergraduate respondents that were not already interested in the existing M.S. degree option in EECS at KU, 7 (50%) said that they will be interested in pursuing the new M.Eng. degree program. This statistic shows the potential of the new M.Eng. program to increase student enrollment in the graduate program in EECS at KU.



Our survey further finds that (Figure 2) of the 36 undergraduate respondents that are interested in the current Master's program in EECS, 28 (about 78%) said that they will pursue the new M.Eng. program, if available, given its match with their professional goals.



Finally, we find that (Figure 3) of the 38 current graduate students that responded to the survey, 19 (50%) said that they will switch to the new M.Eng. program, if offered.

Figure 3. 19 of the 38 graduate M.S. student respondents (50%) said that they will prefer to pursue the M.Eng. degree option, if available



Thus, this survey unequivocally shows the large excitement in our current student population for this new M.Eng. in EECS degree program.

Additionally, we also have anecdotal evidence that industry professionals from the Kansas City Metropolitan area are interested in this new degree program, and are much more likely to pursue graduate school in EECS at KU if such a program were available.

B. Market Analysis

University of Missouri-Kansas City (UMKC) and Kansas State University (K-State) are the two universities in the Kansas City region that compete directly with the University of Kansas for students in the EECS disciplines. UMKC offers non-thesis/coursework-only degree options in Computer Science and Electrical Engineering.

While no other university in the state offers a master's degree in the proposed CIP code of 14.4701, K-State offers a coursework-only master's degree option in Computer Science (that requires writing a major paper), Computer Engineering and Electrical Engineering. While outside the Kansas City region, Wichita State offers an MS in Electrical and Computer Engineering with an option for either a thesis, project or coursework. The industry focused coursework-only Master's degree option is also offered by many other Universities in the country, which suggests that this is a popular and sustainable model for Master's degree programs in EECS.

The American Association for Engineering Education (ASEE) report from July 2019 shows a continuing trend of increasing enrollment in master's engineering programs. They report that Electrical Engineering and Computer Science are among the top three engineering disciplines representing 39% of all engineering master's graduates (the third being Mechanical Engineering). This data suggests that there will continue to remain sufficient interest in the Master's offerings in EECS at KU.

Additionally, the EECS department at KU has seen a drop in M.S. applications in the past few years and all M.S. degrees in the EECS department require a thesis or a project. The proposed M.Eng. in EECS degree has the potential to increase applications and enrollment given it does not require a thesis or major project.

Given the large interest in the new M.Eng. degree program from our own undergraduate student population and professionals who would otherwise not be interested in pursuing graduate education at KU, the exceptional reputation of the EECS department at KU among professionals the Kansas City (KC) area, and the locational advantage of KU in the KC region give us high confidence that there is sufficient interest in the new M.Eng. in EECS degree program to sustain the degree help raise graduate enrollments in EECS at KU.

| Year | Headcount Per Year | | Sem Credit Hrs Per Year | |
|----------------|--------------------|------------|-------------------------|------------|
| | Full- Time | Part- Time | Full- Time | Part- Time |
| Implementation | 14 | 1 | 434 | 7 |
| Year 2 | 18 | 2 | 558 | 20 |
| Year 3 | 22 | 3 | 682 | 39 |

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

VI. Employment

The job outlook for Master's program graduates in Electrical Engineering, Computer Engineering, and Computer Science remains bright, in spite of the effects of the COVID-19 pandemic.

The Bureau of Labor Statistics (BLS) projects jobs for computer and information technology occupations will grow 11% from 2019 to 2029 (2021). This is significantly faster than the projected growth rate for all occupations nationwide. Some Computer Science jobs, such as computer and information research scientists, are projected to grow even more quickly at 15% and typically need at least a master's degree in computer science or a related field. Overall employment of electrical and electronics engineers is projected to grow 3 percent from 2019 to 2029. Electrical Engineering, Computer Engineering and Computer Science are all in the top 10 highest paying Master's degrees, according to the popular employment website, Monster (2021).

There is a vibrant and growing technology and engineering industrial sector in the KC metro area, including firms such as Garmin, Cerner, Sprint, and Honeywell, that hire our graduates and continue to expand. Thus, Electrical and Computer Engineering and Computer Science continue to remain appealing degree options for the interesting area of work, the strong job market and the competitive compensation.

Additionally, we expect some professionals in this program to be currently employed as they pursue the M.Eng. degree. These students will either work on their degree part-time or will take a leave of absence to complete the degree in an accelerated manner on a full-time basis. These students will have almost certain employment (and new internal and/or external opportunities) upon degree completion.

VII. Admission and Curriculum

This proposed University of Kansas (KU) Master's of Engineering (M.Eng.) degree in Electrical Engineering

and Computer Science (EECS) will be a coursework only master's degree. The degree structure is very similar to the existing Master of Science (M.S.) degree programs offered by the EECS department at the University of Kansas. The primary difference is the replacement of the project/research component (that is required by the M.S. degree programs) with an equal number of credit hours of coursework.

A. Admission Criteria

The application process and admission requirements will mirror those for the current M.S. degree programs in the EECS department. Students will apply to the EECS department for the M.Eng. in EECS degree. The application will include a CV, personal statement, academic transcripts, GRE scores, TOEFL scores (when required by the University), and letters of recommendation. The departmental graduate committee (five total members and chaired by the EECS Graduate Director) will review all applications and make admission decisions based on the merits of the overall application packet.

Typical admission requirements for the M.Eng. degree in EECS will remain the same as the existing M.S. degrees in EECS, and include:

- Undergraduate degree in Electrical Engineering, Computer Engineering, Computer Science, or related fields.
- GPA at or above 3.0 on a 4.0 point scale
- GRE scores: 146+ verbal, 155+ quantitative
- Three letters of recommendation
- TOEFL scores at or above 90 on an internet-based exam (or equivalent) for international students only as required by the University.

B. Curriculum

Students select one of the three *tracks*, Electrical Engineering, Computer Engineering, or Computer Science for their M.Eng. degree program. All the tracks have the same curricular structure, which is as follows:

- Students work with an advisor familiar with their selected track area to develop a formal *plan of study*. Every student can select or be assigned a faculty advisor in their first semester. The student will work with their faculty advisor to develop a plan of study that includes courses that are consistent with the student's academic background and identified degree and goals.
- Every plan of study will consist of 30 coursework credits and 1 additional credit of EECS 802. EECS 802 Colloquium/Seminar provides professional development, additional exposure to the breadth of applications in EECS, and covers professional engineering ethics, particularly as applicable and important for individuals in industry.
- M.Eng. plans of study that follow the "*predefined course lists*" (found in Attachment A and similar to those used by our current M.S. degree programs) will be automatically approved by the EECS graduate committee. A predefined plan of study includes:
 - 4 courses from the "Foundational" or "Core" course list
 - 5 courses from the "Elective" course list
 - 1 open elective course related to the student's professional goals
 - at least one semester of EECS Colloquium (EECS 802)
 - a maximum of 2 courses numbered between 500-699 may be counted toward the hours required for the degree.
- The M.Eng. program will have one *predefined course list* for each track (Computer Science, Computer Engineering, or Electrical Engineering). Please see attachment 1 for the predefined course lists for each track.
- M.Eng. plans of study not following a predefined course list will be required to have the EECS graduate committee assess the submitted plan of study, goals and justification.

• Every M.Eng. in EECS plan of study must adhere to the following rules: (i) a total of 30 hours of regular coursework, (ii) EECS 802, (iii) minimum of 7 EECS courses numbered 700 or higher, (iv) maximum of 9 hours outside the department, (v) maximum of 2 courses numbered between 500-699.

| Year 1: Fall | | SCH = Semeste | er Credit Hours |
|--------------|--|---------------|-----------------|
| Course # | Course Name | | SCH |
| EECS 801 | EECS Colloquium and Professional Development | | 01 |
| EECS | Track Core Course 1 | | 03 |
| EECS | Track Core Course 2 | | 03 |
| EECS | Track Elective Course 1 | | 03 |
| EECS | Track Elective Course 2 | | 03 |
| EECS | Track Elective Course 3 | | 03 |

Year 1: Spring

| Course # | Course Name | SCH |
|----------|-------------------------|-----|
| EECS | Track Core Course 3 | 03 |
| EECS | Track Core Course 4 | 03 |
| EECS | Track Elective Course 4 | 03 |
| EECS | Track Elective Course 5 | 03 |
| | Open Elective | 03 |

| Total Number of Semester Credit Hours | | <u>31</u> |
|--|--|-----------|
|--|--|-----------|

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 |
|-------------------|-------------------------|-------------------|--------------------------|------------------------------------|-------------------------------|
| Perry Alexander | Distinguished Professor | Ph.D. | Y | Computer Science | 0.034 |
| Mohammad Alian | Assistant Professor | Ph.D. | Y | Computer Engineering | 0.034 |
| Christopher Allen | Professor | Ph.D. | Y | Electrical Engineering | 0.034 |
| Alexandru Bardas | Assistant Professor | Ph.D. | Y | Computer Science | 0.034 |
| Shannon Blunt | Distinguished Professor | Ph.D. | Y | Electrical Engineering | 0.034 |
| Michael Branicky | Professor | Ph.D. | Y | Computer Science | 0.034 |
| Drew Davidson | Assistant Professor | Ph.D. | Y | Computer Science | 0.034 |
| Kenneth Demarest | Professor | Ph.D. | Y | Electrical Engineering | 0.034 |
| Esam El-Araby | Assistant Professor | Ph.D. | Y | Computer Engineering | 0.034 |
| Shima Fardad | Assistant Professor | Ph.D. | Y | Electrical Engineering | 0.034 |
| Victor Frost | Distinguished Professor | Ph.D. | Y | Electrical Engineering | 0.034 |
| John Gibbons | Teaching Professor | Ph.D. | Ν | Computer Science | 0.034 |
| Morteza Hashemi | Assistant Professor | Ph.D. | Y | Electrical Engineering | 0.034 |
| Tamzidul Hoque | Assistant Professor | Ph.D. | Y | Computer Engineering | 0.034 |

| Rongqing Hui | Professor | Ph.D. | Y | Electrical Engineering | 0.034 |
|------------------|---------------------|-------|---|------------------------|-------|
| David Johnson | Teaching Professor | Ph.D. | N | Electrical Engineering | 0.034 |
| Taejoon Kim | Assistant Professor | Ph.D. | Y | Electrical Engineering | 0.034 |
| Prasad Kulkarni* | Professor | Ph.D. | Y | Computer Science | 0.034 |
| Carlton Leuschen | Professor | Ph.D. | Y | Electrical Engineering | 0.034 |
| Fengjun Li | Associate Professor | Ph.D. | Y | Computer Science | 0.034 |
| Bo Luo | Professor | Ph.D. | Y | Computer Science | 0.034 |
| Matthew Moore | Assistant Professor | Ph.D. | Y | Computer Science | 0.034 |
| Erik Perrins | Professor | Ph.D. | Y | Electrical Engineering | 0.034 |
| David Petr | Professor | Ph.D. | Y | Electrical Engineering | 0.034 |
| Hossein Saiedian | Professor | Ph.D. | Y | Computer Science | 0.034 |
| Alessandro | Associate Professor | Ph.D. | Y | Electrical Engineering | 0.034 |
| Suzanne Shontz | Professor | Ph.D. | Y | Computer Science | 0.034 |
| James Stiles | Professor | Ph.D. | Y | Electrical Engineering | 0.034 |
| Hongyang Sun | Assistant Professor | Ph.D. | Y | Computer Science | 0.034 |
| Zijun Yao | Assistant Professor | Ph.D. | Y | Computer Science | 0.034 |
| Heechul Yun | Associate Professor | Ph.D. | Y | Computer Engineering | 0.034 |
| Cuncong Zhong | Assistant Professor | Ph.D. | Y | Computer Science | 0.034 |

Number of graduate assistants assigned to this program $\dots 0$

IX. Expenditure and Funding Sources (List amounts in dollars. Provide explanations as necessary.)

| A. EXPENDITURES | First FY | Second FY | Third FY |
|---|--------------|--------------|--------------|
| Personnel – Reassigned or Existing Positions | | | |
| Faculty | \$129,188.92 | \$129,188.92 | \$129,188.92 |
| Administrators (other than instruction time) | \$10,975.90 | \$10,975.90 | \$10,975.90 |
| Graduate Assistants | 0 | 0 | 0 |
| Support Staff for Administration (e.g., secretarial) | 8,507.6 | 8,507.6 | 8,507.6 |
| Fringe Benefits (total for all groups) | \$52,035.35 | \$52,035.35 | \$52,035.35 |
| Other Personnel Costs | | | |
| Total Existing Personnel Costs – Reassigned or Existing | \$200,707.77 | \$200,707.77 | \$200,707.77 |
| | | | |
| 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 | \$200,707.77 | \$200,707.77 | \$200,707.77 |

| D FUNDING COUDCES | · · · · · · · · · · · · · · · · · · · | \mathbf{E}^{i} and $\mathbf{E}\mathbf{V}$ | $\mathbf{C} = 1 \mathbf{E} \mathbf{V}$ | $T_{1} = 1 T_{V}$ |
|--|---------------------------------------|---|--|-------------------|
| B. FUNDING SOUKCES | | F1rst F Y | Second F Y | I nira F Y |
| (projected as appropriate) | Current | (New) | (New) | (New) |
| T J T T T | | | | |
| Tuition / State Funds | | \$184,867.20 | \$242,297.60 | \$302,243.20 |
| Student Fees | | \$24,122.70 | \$31,616.60 | \$39,438.70 |
| Other Sources | | 0 | 0 | 0 |
| GRAND TOTAL FUNDING | | \$208,989.90 | \$273,914.20 | \$341,681.90 |
| | | | | |
| C. Projected Surplus/Deficit (+/-) (Grand Total Funding <i>minus</i> Grand Total Costs) | | \$8,282.13 | \$73,206.43 | \$140,974.13 |

X. Expenditures and Funding Sources Explanations

A. Expenditures

Personnel – Reassigned or Existing Positions

The current EECS Graduate Program Director (0.1 FTE faculty) and Graduate Program Coordinator (0.2 FTE staff) will administer this degree program, along with the existing Master of Science and Doctoral degree programs in EECS. Most faculty in the department are expected to teach graduate-level classes that will have M.Eng. degree program students in their classes along with students from the existing M.S. and Ph.D. graduate

programs. EECS faculty typically teach about one *graduate* class per year, which is calculated as 0.1 FTE. Since each graduate class will have a mix of M.Eng., M.S., and Ph.D. degree students, 1/3rd of 0.1 FTE (or 0.034 FTE) for each faculty member is allocated to the M.Eng. program.

Personnel – New Positions

No new positions are required for instruction or to administer this degree program.

Start-up Costs – One-Time Expenses

No new resources are required to initiate this degree program.

Operating Costs – Recurring Expenses

No new resources are required for operating costs of this degree program.

B. Revenue: Funding Sources

Funding for the program will be through tuition and student fees. We expect primarily Kansas residents and those qualifying for in-state tuition will be interested in the M.Eng. program. The current in-state tuition and student fees for Engineering graduate students are \$419.20/credit hour and \$54.70/credit hour, respectively. The projected *student semester credit hours* from Section V (along with the tuition and fees given above) are used to calculate the revenue from funding sources generated by this program. We have conservatively estimated the number of students interested in the program and expect the program to meet KBOR minimum requirements for enrollments and graduates within three years of inception.

C. Projected Surplus/Deficit

Our budget estimate indicates the degree program will run a surplus beginning in Year 1.

XI. References

- U.S. Bureau of Labor Statistics. (2021). Occupational Outlook Handbook: Computer and Information Technology Occupations. <u>https://www.bls.gov/ooh/computer-and-information-technology/home.htm</u>.
- U.S. Bureau of Labor Statistics. (2021). Occupational Outlook Handbook,: Electrical and Electronics Engineers. <u>https://www.bls.gov/ooh/architecture-and-engineering/electrical-and-electronics-engineers.htm</u>.
- Monster, Inc. (2021). Best Master's Degrees. <u>https://www.monster.com/career-advice/article/best-and-worst-paying-masters-degrees</u>.
- American Association for Engineering Education (ASEE). (2019). Engineering by the Numbers. <u>https://ira.asee.org/wp-content/uploads/2019/07/2018-Engineering-by-Numbers-Engineering-Statistics-UPDATED-15-July-2019.pdf</u>.

| <u>Computer</u> | Science Track Predefined Course List | |
|-----------------|--|-------|
| Foundationa | al/Core Computer Science Courses | |
| Code | Title | Hours |
| EECS 639 | Introduction to Scientific Computing | 3 |
| EECS 730 | Introduction to Bioinformatics | 3 |
| EECS 731 | Introduction to Data Science | 3 |
| EECS 738 | Machine Learning | 3 |
| EECS 743 | Advanced Computer Architecture | 3 |
| EECS 750 | Advanced Operating Systems | 3 |
| EECS 762 | Programming Language Foundation I | 3 |
| EECS 765 | Introduction to Cryptography and Computer Security | 3 |
| EECS 780 | Communication Networks | 3 |
| | | |
| Elective Cor | nputer Science Courses | |
| Code | Title | Hours |
| EECS 649 | Introduction to Artificial Intelligence | 3 |
| EECS 660 | Fundamentals of Computer Algorithms | 3 |
| EECS 690 | Special Topics: | 1-3 |
| EECS 700 | Special Topics: | 1-5 |
| EECS 718 | Graph Algorithms | 3 |
| EECS 739 | Parallel Scientific Computing | 3 |
| EECS 741 | Computer Vision | 3 |
| EECS 742 | Static Analysis | 3 |
| EECS 745 | Implementation of Networks | 3 |
| EECS 746 | Database Systems | |
| EECS 753 | Embedded and Real Time Computer Systems | 3 |

Attachment A: Predefined Course Lists for M.Eng. in EECS - KU

| EECS 755 | Software Modeling and Analysis | 3 |
|----------|--|---|
| EECS 764 | Analysis of Algorithms | 3 |
| EECS 767 | Information Retrieval | 3 |
| EECS 768 | Virtual Machines | 3 |
| EECS 776 | Functional Programming and Domain Specific Languages | 3 |
| EECS 781 | Numerical Analysis I | 3 |
| EECS 782 | Numerical Analysis II | 3 |
| EECS 830 | Advanced Artificial Intelligence | 3 |
| EECS 837 | Data Mining | 3 |
| EECS 838 | Applications of Machine Learning in Bioinformatics | 3 |
| EECS 843 | Programming Language Foundation II | 3 |
| EECS 866 | Network Security | 3 |
| EECS 940 | Theoretic Foundation of Data Science | 3 |

Computer Engineering Track Predefined Course List

| Foundational/Core Computer Engineering Courses | | | | |
|--|---|-------|--|--|
| Code | Title | Hours | | |
| EECS 644 | Introduction to Digital Signal Processing | 3 | | |
| EECS 660 | Fundamentals of Computer Algorithms | 3 | | |
| EECS 665 | Compiler Construction | 4 | | |
| EECS 739 | Parallel Scientific Computing | 3 | | |
| EECS 743 | Advanced Computer Architecture | 3 | | |
| EECS 750 | Advanced Operating Systems | 3 | | |
| EECS 762 | Programming Language Foundation I | 3 | | |
| EECS 780 | Communication Networks | 3 | | |
| EECS 786 | Digital Very-Large-Scale-Integration | 3 | | |
| | | | | |

| Elective Computer Engineering Courses | | | | |
|---------------------------------------|--|-------|--|--|
| Code | Title | Hours | | |
| EECS 611 | Electromagnetic Compatibility | 3 | | |
| EECS 628 | Fiber Optic Communication Systems | 3 | | |
| EECS 638 | Fundamentals of Expert Systems | 3 | | |
| EECS 649 | Introduction to Artificial Intelligence | 3 | | |
| EECS 664 | Introduction to Digital Communication Systems | 3 | | |
| EECS 690 | Special Topics: | 1-3 | | |
| EECS 700 | Special Topics: | 1-5 | | |
| EECS 718 | Graph Algorithms | 3 | | |
| EECS 730 | Introduction to Bioinformatics | 3 | | |
| EECS 731 | Introduction to Data Science | 3 | | |
| EECS 738 | Machine Learning | 3 | | |
| EECS 739 | Parallel Scientific Computing | 3 | | |
| EECS 740 | Digital Image Processing | 3 | | |
| EECS 742 | Static Analysis | 3 | | |
| <u>EECS 744</u> | Communications and Radar Digital Signal Processing | 3 | | |
| EECS 746 | Database Systems | | | |
| EECS 753 | Embedded and Real Time Computer Systems | 3 | | |
| EECS 759 | Estimation and Control of Unmanned Autonomous Systems | 3 | | |
| EECS 764 | Analysis of Algorithms | 3 | | |
| EECS 765 | Introduction to Cryptography and Computer Security | 3 | | |
| EECS 767 | Information Retrieval | 3 | | |
| EECS 768 | Virtual Machines | 3 | | |
| EECS 769 | Information Theory | 3 | | |
| EECS 776 | Functional Programming and Domain Specific Languages | 3 | | |
| EECS 781 | Numerical Analysis I | 3 | | |
| EECS 782 | Numerical Analysis II | 3 | | |

3

Electrical Engineering Track Predefined Course List

| Foundational/Core Electrical Engineering Courses | | | | |
|--|--|-------|--|--|
| Code | Title | Hours | | |
| EECS 628 | Fiber Optic Communication Systems | 3 | | |
| EECS 713 | High-Speed Digital Circuit Design | 3 | | |
| EECS 723 | Microwave Engineering | 3 | | |
| EECS 728 | Fiber-optic Measurement and Sensors | 3 | | |
| EECS 744 | Communications and Radar Digital Signal Processing | 3 | | |
| EECS 780 | Communication Networks | 3 | | |
| EECS 786 | Digital Very-Large-Scale-Integration | 3 | | |
| EECS 820 | Advanced Electromagnetics | 3 | | |
| EECS 861 | Random Signals and Noise | 3 | | |
| EECS 862 | Principles of Digital Communication Systems | 3 | | |
| EECS 863 | Network Analysis, Simulation, and Measurements | 3 | | |
| | | | | |
| Elective Electri | cal Engineering Courses | | | |
| Code | Title | Hours | | |
| EECS 611 | Electromagnetic Compatibility | 3 | | |
| EECS 622 | Microwave and Radio Transmission Systems | 3 | | |
| EECS 649 | Introduction to Artificial Intelligence | 3 | | |
| EECS 664 | Introduction to Digital Communication Systems | 3 | | |
| EECS 670 | Introduction to Semiconductor Processing | 3 | | |
| EECS 690 | Special Topics: | 1-3 | | |
| EECS 700 | Special Topics: | 1-5 | | |
| EECS 721 | Antennas | 3 | | |

| EECS 725 | Introduction to Radar Systems | 3 |
|-----------------|---|---|
| EECS 738 | Machine Learning | 3 |
| EECS 740 | Digital Image Processing | 3 |
| EECS 743 | Advanced Computer Architecture | 3 |
| EECS 745 | Implementation of Networks | 3 |
| EECS 769 | Information Theory | 3 |
| <u>EECS 780</u> | Communication Networks | 3 |
| EECS 781 | Numerical Analysis I | 3 |
| EECS 782 | Numerical Analysis II | 3 |
| EECS 784 | Science of Communication Networks | 3 |
| <u>EECS 788</u> | Analog Integrated Circuit Design | 3 |
| EECS 823 | Microwave Remote Sensing | 3 |
| <u>EECS 828</u> | Advanced Fiber-Optic Communications | 3 |
| <u>EECS 844</u> | Adaptive Signal Processing | 3 |
| <u>EECS 865</u> | Wireless Communication Systems | 3 |
| EECS 868 | Mathematical Optimization with Applications | 3 |
| EECS 869 | Error Control Coding | 3 |
| EECS 881 | High-Performance Networking | 3 |
| EECS 882 | Mobile Wireless Networking | 3 |
| EECS 888 | Internet Routing Architectures | 3 |
| EECS 965 | Detection and Estimation Theory | 3 |

Act on Request for a COVID-19 Response Exception to the Board's Tenure Clock Extension Policy

Summary

Board policy specifies that faculty are limited to two extensions to their tenure-track clock. In response to the significant disruptions that have occurred based on the COVID-19 pandemic, there is a need to review a request for an exception to this policy for the faculty cohort who began their positions during the Fall 2020 semester. Board staff recommend approving this request.

January 4, 2022

Background

Board policy prescribes a tenure-track clock, which is the timeline by which university tenure-track faculty are reviewed for tenure. This policy specifies that the tenure-track clock shall generally not exceed seven years. Additionally, the policy prescribes specific parameters regarding the tenure-track clock. Most notably, policy 2.C.2.b.vii.2.e states "no more than two extensions of the tenure clock may be granted to a faculty member for any reason."

On April 15, 2020, the Board approved a one-time exception to this policy based on COVID-19 causing disruptions to scholarly work and teaching. This provided universities the flexibility to grant a one-year tenure-clock extension for the 2019-2020 academic year that did not count toward the two extensions that are allowed under policy.

When this exception was approved, it was noted that additional flexibility might also be needed in Fall 2020. Given that significant disruptions continued through the Fall 2020 semester due to COVID-19, ESU, K-State, KU, KUMC, PSU, and WSU are requesting to grant an additional tenure-clock extension to the faculty cohort who began their positions during the Fall 2020 semester.

Letters of support for this request from the chief academic officers are included in the subsequent pages. Board staff recommend approval.

Daniel Archer VP, Academic Affairs

EMPORIA STATE UNIVERSITY

Campus Box 4045 1 Kellogg Circle Emporia, Kansas 66801-5415 620-341-5171 www.emporia.edu

Office of THE PROVOST

November 17, 2021

To: Kansas Board of Regents

From: George Arasimowicz, Ph.D. *George Arasimowicz* Provost, Emporia State University

Significant disruptions to faculty work continued through the fall 2020 semester due to the COVID-19 pandemic. Therefore, I join my fellow CAO's to request that the Board extend the one-time system wide exception for tenure-clock extensions (granted based on COVID-19) to the faculty cohort who began their positions during the fall 2020 semester. For additional background, please see:

KBOR's COVID-19 Board Policy Exceptions, Exemptions or Suspensions are listed here: https://www.kansasregents.org/about/policies-by-laws-missions/board_policy_manual_2.

The one-time system wide exception was approved for tenure-clock extensions granted based on COVID-19. See the <u>April 15, 2020 Board agenda</u> (page 55) and the <u>April 15, 2020 Board minutes</u> for details.

Thank you for your consideration.



Office of the Provost and Executive Vice President

November 23, 2021

Dear Members of the Kansas Board of Regents,

The faculty at Kansas State University appreciate KBOR's support throughout the pandemic, particularly for provisional faculty attempting to earn tenure. The one-time system wide exception for tenure-clock extensions was approved for tenure-clock extensions granted based on COVID-19. See the <u>April 15, 2020 Board agenda</u> (page 55) and the <u>April 15, 2020 Board minutes</u> for details.

I join my fellow CAO's to request that the Board extend the one-time system wide exception for tenure-clock extensions to the faculty cohort who began their positions during the fall 2020 semester. These newly hired faculty continue to experience significant disruptions to their work as higher education continues to experience the impact of COVID-19.

Thank you for your consideration and for your continued support of the faculty at our KBOR institutions.

Respectfully,

Shat

Charles S. Taber, Ph.D. 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



November 22, 2021

Dear Members of the Kansas Board of Regents,

Significant disruptions to faculty work continued through the fall 2020 semester due to the COVID-19 pandemic. Therefore, I join my fellow CAOs to request that the Board extend the one-time system wide exception for tenure-clock extensions (granted based on COVID-19) to the faculty cohort who began their positions during the fall 2020 semester. For additional background, please see:

KBOR's COVID-19 Board Policy Exceptions, Exemptions or Suspensions are listed here: https://www.kansasregents.org/about/policies-by-laws-missions/board_policy_manual_2

The one-time system wide exception was approved for tenure-clock extensions granted based on COVID-19. See the <u>April 15, 2020 Board agenda</u> (page 55) and the <u>April 15, 2020 Board minutes</u> for details.

Respectfully,

Barbara A. Behelmeyer

Barbara A. Bichelmeyer, Ph.D. Provost & Executive Vice Chancellor

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



November 29, 2021

Dear Members of the Kansas Board of Regents,

The faculty and leadership of the University of Kansas Medical Center appreciate the one-time COVID-19 extension of the tenure clock provided in spring 2020. Significant disruptions to faculty work continued through the fall 2020 semester due to the pandemic. Therefore, I join my fellow CAO's to request that the Board extend the one-time system wide exception for tenure-clock extensions (granted based on COVID-19) to the faculty cohort who began their positions during the fall 2020 semester. For additional background, please see:

KBOR's COVID-19 Board Policy Exceptions, Exemptions or Suspensions are listed here: https://www.kansasregents.org/about/policies-by-laws-missions/board_policy_manual_2

The one-time system wide exception was approved for tenure-clock extensions granted based on COVID-19. See the <u>April 15, 2020 Board agenda</u> (page 55) and the <u>April 15, 2020 Board minutes</u> for details.

Respectfully

Robert M. Klein, PhD, FAAA Chancellor's Club Professor Vice Chancellor for Academic and Student Affairs The University of Kansas Medical Center

> Vice Chancellor for Student Services Mail Stop 4029 | 3901 Rainbow Blvd. | Kansas City, KS 66160 | (913) 588-4698 | Fax (913) 588-4697 | www.kumc.edu/student-services.html



November 19, 2021

Dear Members of the Kansas Board of Regents,

Significant disruptions to faculty work continued through the fall 2020 semester due to the COVID-19 pandemic. Therefore, I join my fellow CAO's to request that the Board extend the one-time system wide exception for tenure-clock extensions (granted based on COVID-19) to the faculty cohort who began their positions during the fall 2020 semester.

This item will be subject to the Meet and Confer process at PSU under our Pittsburg State University/Kansas National Education Association and Kansas Board of Regents contract.

For additional background, please see:

 $\label{eq:kbors} KBOR's \ COVID-19 \ Board \ Policy \ Exceptions, \ Exemptions \ or \ Suspensions \ are \ listed \ here: \\ https://www.kansasregents.org/about/policies-by-laws-missions/board_policy_manual_2 \ Double \ Policy_manual_2 \$

The one-time system wide exception was approved for tenure-clock extensions granted based on COVID-19. See the <u>April 15, 2020 Board agenda</u> (page 55) and the <u>April 15, 2020 Board minutes</u> for details.

Respectfully,

oward W. Sunt

Howard W. Smith, Ph.D. Provost and Vice President of Academic Affairs Pittsburg State University

1701 South Broadway · Pittsburg, Kansas 66762-7554 · 620/235-4113 fax: 620/235-4080 · www.pittstate.edu/office/provost/



November 16, 2021

Dear Members of the Kansas Board of Regents,

Significant disruptions to faculty work continued through the fall 2020 semester due to the COVID-19 pandemic. Therefore, I join my fellow CAO's to request that the Board extend the one-time system wide exception for tenure-clock extensions (granted based on COVID-19) to the faculty cohort who began their positions during the fall 2020 semester. For additional background, please see:

KBOR's COVID-19 Board Policy Exceptions, Exemptions or Suspensions are listed here: https://www.kansasregents.org/about/policies-by-laws-missions/board_policy_manual_2

The one-time system wide exception was approved for tenure-clock extensions granted based on COVID-19. See the <u>April 15, 2020 Board agenda</u> (page 55) and the <u>April 15, 2020 Board minutes</u> for details.

Respectfully,

Shuley lefever

Shirley Lefever, Ph.D Interim Executive Vice President & Provost

WICHITA STATE UNIVERSITY | Academic Affairs | 1845 Fairmount Street | Wichita, Kansas 67260-0013 tele: (316) 978-3010 | fax: (316) 978-3227 | web: www.wichita.edu

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