

EMPORIA STATE UNIVERSITY INSTITUTIONAL OVERVIEW

Program Review Process

At Emporia State University, administrative units have the responsibility to organize program review efforts in a manner that best suits their environment and the nature of the program being reviewed. It is considered essential that all faculty connected to the program participate fully and actively in the program review process. While some departments appoint individual faculty and/or committees to process data associated with the review, reports are provided to the faculty as a whole for discussion, reflection, and decision making.

Required Components of Program Review

The information gathered for program review is meant to be helpful, informative, and instructive. It is a vehicle to change, improve, and enhance programs. While the review includes statistical and quantifiable information, qualitative and 'value added' information is equally important. Review components have been provided below, along with required and suggested elements within each component.

1. Centrality of the program to fulfilling the mission and role of the institution.

- Alignment with ESU mission
- Support of ESU strategic plan
- Support of Regents strategic plan
- Distinctiveness

2. The quality of the program as assessed by the strengths, productivity, and qualifications of the faculty.

- Effective teaching, including the use of appropriate technology
- Research and creative activity
- Service contributions
- Honors/awards

3. The quality of the program as assessed by its curriculum and impact on students.

- Program learning goals and outcomes assessment
- High-impact learning opportunities
- Student achievement (research and creative activity, leadership, honors/awards)
- Specialized accreditation and other external evaluation
- Student feedback

4. Demonstrated student need and employer demand for the program.

- Success in meeting Regents minima (*required element; see KHEDS Minima Report*)

- Graduates' employment and advanced study
- Alumni and employer surveys
- Disciplinary employment trends and market demand data

5. The service the program provides to the discipline, the university, and beyond.

- Support of general education and other majors
- Contributions to campus and community life
- Collaboration with external partners
- Advancement of the discipline
- Impact on Kansans' quality of life

6. The program's cost effectiveness.

- Cost of instruction (*required element; see Program Review Indicators for cost per credit hour and cost per FTE student*)
- External funding

Use of Data

The program review process at the departmental level requires gathering quantitative and qualitative program information. Both types of data assist units to reflect upon the quality of the program and lend validity to the self-evaluation and resulting recommendations. Budget and financial information is provided by Fiscal Affairs. The Office of Institutional Effectiveness compiles quantitative data related to numbers of majors, credit hour production, productivity per full time/part-time FTE, etc. Surveys of recent graduates, current students, and employers provide qualitative data. For some programs, qualitative data may also include numbers of students who matriculate into graduate programs of study.

Once data are collected, faculty, staff, and administrators engage in serious and ongoing dialogue both formally (department meetings) and informally (hallway discussions, over coffee, etc.) about the implications of the data. Department chairs provide written summaries, including recommendations for each program of study, to the respective school/college dean and to the provost.

Significant Changes and Recommendations

In following up on programs previously reported to the Board from 2018-2021 with "further review" recommendations, all are being continued and supporting rationales are provided in the accompanying table narratives. The Information Technology MS program has been launched in an online accelerated format and fall 2021 enrollment was 24, a 324% increase from fall 2020. The Informatics MS enrollment has increased to 19 (46% increase) and continues to grow. We continue to monitor enrollment in the Business Data Analytics program.

We have completed the discontinuance of the Teaching English to Speakers of Other Languages (TESOL) masters' program and affiliated certificates. We have completed the discontinuance of the experimental and educational psychology programs and reactivated the Psychology MS

degree program which now includes experimental and school psychology (MS/Ed.S.) as concentrations. We have completed the transition of the Athletic Training program from the undergraduate to the graduate level.

We are continuing our review of the Physics (40.0801) program including detailed analyses of costs and revenues, the curriculum, external market demand, and prospective employment outlook. The goal is to revitalize the program through strategic faculty investments, retirement salaries savings, investments in enhanced learning spaces, updates to the program's curriculum and integrating popular concentrations in robotics, unmanned aerial systems, and space science.

Fiscal Implications of all Recommended Program Changes

	Program Outcome	*Instruction Cost Reduction (faculty salaries + benefits)	Loss of Tuition and Fees Revenues from no enrollments	Net Change in Instruction Cost Reduction less loss of Tuition & Fees Revenues
FY 2017	Data Security – Inactivated/Deleted (no students in the program when discontinued, no faculty on contract.)	\$0	\$0	\$0
	Computer Science – Consolidated/Merged – cost/revenue neutral transition	\$0	\$0	\$0
FY 2018	Music Education (BME) – Consolidated/Merged	\$0	\$0	\$0
	Physical Science (BA/BS) – Inactivated/Deleted – at the time of discontinuance the program had 25 students.	\$64,040	\$136,900 (\$5,476 x 25)	-\$72,860
FY 2019	Rehabilitation Counseling (MS) – Inactivated/Deleted – at the time of discontinuance the program had 6 students.	\$91,029	\$91,500 (\$338.89 per credit hour x 270 SCH)	-\$471
	Master Teacher – Consolidated/Merged	\$0	\$0	\$0
FY 2020	TESOL MS – Inactivated/Deleted – at the time of discontinuance the program had 14 students.	\$150,035	\$99,676 (UG \$252.76 x 114 SCH + \$347.36 x 204 SCH)	\$50,359
	Business Education Masters – Inactivated/Deleted – at the time of discontinuance there weren't any students enrolled in the program.	\$67,873	\$0	\$67,873
	Industrial/Organizational Psychology MS – Inactivated/Deleted – at the time of the program discontinuance there were 4 students who matriculated into other psychology concentrations.	\$30,657	\$0	\$30,657
	School Psychology MS – Consolidated/Merged	\$0	\$0	\$0
FY 2021	No program changes – merges, splits, or discontinuances			

*Note that Instruction Cost Reduction is offset by the reduction in tuition and fees revenues produced by the students enrolled in the programs, respectively.

**Emporia State University
Program Review – Reporting Year 2022**

Program	CIP	Degree Level	Recommendation*	Notes**
Communication/ Speech Communication	09.0101	B	Continue	
Biology	26.0101	B, M	Continue	
Biochemistry And Molecular Biology	26.0210	B	*Continue	Interdisciplinary and Coordinated Program (ICP) – positive net revenues
Physical Science	40.0101	B, M	*Continue as licensure option only	*Physical Sciences major degree (BA/BS) program was previously discontinued (2018). The program being reviewed is an academic support program serving as the middle school teacher licensure option for future science teachers, and the program essentially is cost neutral with positive net revenues.
Chemistry	40.0501	B	*Continue	*Recent financial costs/revenues analysis indicates that the program is net revenue positive, and the program is an Academic Support Program linked to several other programs (e.g., Biochemistry & Molecular Biology and Forensic Science).
Earth Science	40.0601	B	*Continue	*Academic Support Program – positive net revenues
Physics	40.0801	B	Further Review	The program is being reviewed for viability through

				financial analyses, curricular review, and external environment research. Net revenues are positive.
Forensics	43.0406	M	Continue	
Theatre	50.0501	B	Continue	This is an academic support program. Several new departmental recruiting efforts are showing signs of growth. In addition, the number of program faculty has been reduced thus increasing the efficiency of the program.
Art	50.0701	B	Continue	
Nursing	51.3801	B	Continue	
Master Of Science In Nursing	51.3801	M	Not applicable to this year's reporting cycle.	This new program was initially launched in the spring of 2021 and should be placed in the review cycle at least 6-years in the future to allow for collection of KBOR 5-year program minima data.

M= Masters; B=Bachelors; D= Doctorate

Highlighting indicates these programs were a part of the University's Strategic Program Alignment Report on Low-Enrollment Programs last year. However, please go ahead and provide information on these programs for this report.

***Recommendation options are: Continue, Additional Review, Enhance, Discontinue**

****Notes are only required for programs that have a Recommendation other than "Continue"**

**Emporia State University
Status of Programs Needing Additional Review
Reporting to Board AY 2018-2021**

Program	Year of Report to Board	CIP	Degree Level	Recommendation*	Explanation of Recommendation**
Economics	2020	45.0603	B	Continue	ESU's Economics program is unique in KS as the only STEM-based quantitative economics program. This academic support program has strong outcomes with respect to retention, completion, career placement, and percent of graduates remaining in Kansas for employment.
Music	2020	50.0901	M	Continue	***This is a Service Support Program (SSP). The variability in the numbers for this program is expected, as we leverage this program through graduate assistants who serve key roles in the undergraduate program. Recently, we have signed articulation agreements with foreign countries who send international students to the program. The cost to operate this program is neutral as the graduate assistants serve in roles that would require additional faculty positions if the program were to be discontinued. We will continue this program as long as it is a viable alternative to hiring additional faculty and maintains double digit enrollments.
Political Science	2020	45.1001	B	Continue	Recent financial costs analysis indicate that the program is revenue

					positive and is an academic support program (e.g., BSE Social Sciences, Informatics, and General Education).
Information Technology	2021	11.0103	M	Continue	This program was first launched in the fall of 2018 and has not yet been in existence for the KBOR 5-year trend data to be representative of program minima standards. The program is now offered in traditional and accelerated formats and enrollment has ranged from 34-39 students for AY2021 terms. The Accelerated Online program is gaining traction and enrollment numbers are projected to grow each year.
Informatics	2021	11.0104	M	Continue	The Informatics MS program now has three distinct concentrations and the Quantitative Economics concentration has seen enrollments eclipse 19 students in the fall of 2021. Demand from industry employers is strong and growing. This program serves a high demand need for producing technology applications experts with database development and information management knowledge.
Business Data Analytics	2021	52.1301	B	Continue	This program was first launched in the fall of 2018 and has not yet been in existence for the KBOR 5-year trend data to be representative of program minima standards. The program continues to see gradual enrollment growth reaching 21 students in

					spring 2021. This program has a high potential for enrollment growth and will continue to produce graduates in high demand fields.
--	--	--	--	--	--

M= Masters; B=Bachelors; D= Doctorate

Highlighting indicates these programs were a part of the University's Strategic Program Alignment Report on Low-Enrollment Programs last year. Please go ahead and provide information on these programs for this report.

***Recommendation options are: Continue, Additional Review, Enhance, Discontinue**

****Please provide explanation for each recommendation**

***** In last year's Program Review Report, ESU indicated this program would be assessed as a part of ESU's Spring 2021 budget reduction process.**

50.0701 Art BA-BFA-BS

Centrality of the program to fulfilling the mission and role of the institution.

The Department of Art addresses the University's mission of "*Preparing students for lifelong learning, rewarding careers, and adaptive leadership*" in many different capacities. Studio art practice cultivates an environment of proactive creative research and problem solving. Students develop skillsets for working collaboratively and gain confidence to independently seek solutions. In the interactive applied learning studio space, a student may assume a leadership role, as they help each other in solving technical or conceptual issues in each other's work. Time management, confidence, and ambition are all enhanced in studio courses. Beyond the studio course structure, students learn creative independence in more advanced settings and individual projects veer into many directions that can deviate from the initial vision. Students' minds are trained to evolve and adapt to whatever problems arise in the context of their work. Collegial group discussions on critiques enable students to have a constructive dialogue about the decisions that they are making in their works. This skill enables students to diplomatically touch on topics that might be otherwise sensitive, it also makes them better listeners. The Department of Art has long been a supporter of inclusion of ideas of people from a wide variety of backgrounds – be it ethnic, religious, or political. We have distinctive initiatives in curricula and programs that include our Glass and Engraving Arts concentrations. We have the only glass program in the state, and our engraving arts program is the only program in the country developed through a partnership with the Glendo Corporation in Emporia, KS. Our Art Forum Lecture series exposes students to the careers of artists in varying disciplines. These monthly lectures are integrated into program courses and include multiple artists speaking about their works and careers.

The quality of the program as assessed by the strengths, productivity, and qualifications of the faculty.

The Department of Art has eight tenured or tenure track faculty that are all actively pursuing creative research in their fields. Faculty regularly exceed the research requirements of the Department of Art and present their works in solo shows, international exhibitions, and residencies. They are often invited as guest artists to demonstrate their expertise at other institutions. The faculty are active participants in local exhibitions and events, and regularly support local downtown businesses.

The quality of the program as assessed by its curriculum and impact on students.

The BA, BFA, BS, and BSE degrees in Art are regularly assessed with a mid-program portfolio review and a senior exhibition. The department uses the mid-program tool to evaluate the results from the foundations curriculum and the senior exhibition looks at more specific concentrations and degree programs. The department continuously focuses on improving student learning and success. The Department of Art is accredited by the National Association of Schools of Art and Design (NASAD). Students regularly participate in exhibiting their works as a part of Emporia First Friday, as well as, the Annual Juried student show and their senior exhibition. Students are encouraged to enter national competitions, and many have found success in having their works displayed. Students have also attended conferences for the Glass Art Society, The Firearms Engraving Guild, the Mid-America Printmaking Conference, and the Society for Photographic Education, the National Council of Education for the Ceramic Arts, and the Kansas Art Education Association Conference. In the most recent 2021 senior survey, the vast majority of students indicated that they agreed or strongly agreed that the department was successful in the following areas: effective teaching and instruction (100%), academic and professional development of students (100%), preparedness for future professional work (83%), advising (100%), out-of-class assistance with coursework (88%) and prompt feedback on their work (100%).

Demonstrated student need and employer demand for the program.

Demand for the Art program exceeds the KBOR program minima thresholds as shown in the KHEDS Minima Report. The 5-year annual average headcount for fall upper-division Art majors is 83.4 and annual

degree completions are 22.4. According to the executive summary from Emporia State University Career Services, students in the Art and Art Education programs have a 93.3% career placement rate. Our graduates have pursued rewarding careers for example, Kristin Elliott, Museum of Glass, Tacoma, WA; Ryleigh Paxton, Professional Engraver for Bill Oyster Bamboo Fly Rods, Marco Hernandez, Full Printmaking Instructor at Wichita State; Molly Day, Classroom Manager at GRS Tools; Austin Stern, Professional Glass Artist; and Ashton Ludden, who owns and operates Relay Ridge studio and gallery and works part time at Arrowmont School of Crafts. Recent graduates with a BSE in Art Education have been employed in teaching positions across the state including Ryan Howerton at Campus High School in Wichita, Kansas; Brooke Juda at Williams Science and Fine Art Magnet Elementary School in Topeka, KS; and Taryn Carroll at Fort Osage Elementary School.

The service the program provides to the discipline, the university, and beyond.

The Department of Art provides four classes for the general education program which include: AR 105 Art Appreciation, AR 225 Art History, AR 101 Basic Drawing and AR 305 Introduction to Digital Design. We offer AR 099 Art Forum which is a visiting artist series that anyone on campus or the community is welcome to visit. We also have two galleries open to the public that display exhibitions of visiting artists, students, and faculty. Students and faculty regularly participate in Emporia First Friday Art Walk in downtown Emporia. The areas of Graphic Design and Photography have collaborated with businesses and other university departments to provide students with internship opportunities. Glendo LLC has also partnered with the department to enhance and fund the Engraving Arts program through financial and equipment donations. Our students are regularly involved in events that effect the community, thus instilling in them the importance of contributing to the culture and quality of life in their hometowns.

The program's cost effectiveness.

The annual cost of instruction for the most recent four year trend averages are \$275 per credit hour and \$4,128 per FTE student. Art faculty also have responsibilities in addition to their course instruction, service and research. We also manage studio spaces that require equipment maintenance, inventory of supplies, ordering of materials, cleaning, organization, and hazardous waste compliance. At many other institutions, there is usually a full-time technician or a graduate assistant employed to help maintain these areas.

Recommendation: Continue the program

26.0210 Biochemistry and Molecular Biology BMB

Centrality of the program to fulfilling the mission and role of the institution.

ESU's mission is "*Preparing students for lifelong learning, rewarding careers, and adaptive leadership.*"

The Biochemistry and Molecular Biology (BMB) major provides a program of study that fulfills this mission by preparing students for diverse careers in a rapidly evolving field. As an interdisciplinary Bachelor of Science degree sponsored by the Departments of Biology and Physical Sciences, the program fills a niche at the interface of Biology and Chemistry. The BMB program supports the University Strategic Plan by providing distinctive programs and curricula that emphasize 'high-impact' learning. The BMB program has helped attract faculty who are excellent teachers, committed mentors, and skilled researchers to the Department of Biological Sciences and the Department of Physical Sciences at Emporia State University. The program and its excellent faculty and facilities have in turn helped recruit excellent students to Emporia State University who may not have considered attending ESU if the program did not exist. Our BMB graduates have gone on to become doctors, dentists, pharmacists, laboratory researchers, and scholars at other universities. The program has thus fulfilled the University's mission to prepare students to be lifelong learners who attain rewarding careers and participate in adaptive leadership. These faculty and students have also exhibited the University's core values of excellence, respect, responsibility and service to Emporia State University, the City of Emporia and the State of Kansas. As a distinctive interdisciplinary program, the BMB has trained many young scientists who have entered the Kansas workforce in a number of critical roles. The program has thus contributed significantly to ESU's strategic goal of "*enhancing the competitive role of Kansas by enrolling, retaining, and graduating students ready for life and career.*"

The quality of the program as assessed by the strengths, productivity, and qualifications of the faculty.

The BMB program combines courses already offered within the Biology and Chemistry program curricula. The primary courses and advising are managed by Chemistry faculty in the Physical Sciences department and Microbial/Cellular Biology faculty in the Biology department. These faculty are active researchers and provide opportunities for these undergraduates to be engaged in authentic research. These faculty all serve an integral role as mentors in the Kansas IdEA Network of Biomedical Excellence, a NIH-funded program that aims to increase the bioscience workforce in Kansas. All faculty contributing to the program are tenured/tenure-track and fully qualified by HLC standards and also serve as members of the graduate faculty.

The quality of the program as assessed by its curriculum and impact on students.

The BMB program includes a requirement for students to participate in research. This is accomplished through mentoring students in collaborative projects with faculty or through research-like classes where students create research projects by extending work from previous classes. This emphasis on intra and extra-curricular research produced 49 separate presentations and three co-authored publications by our students over the past four years.

Demonstrated student need and employer demand for the program.

The Biochemistry and Molecular Biology (BMB) major is an excellent pre-professional program, providing training to gain admission into post-baccalaureate healthcare programs (M.D./D.O./D.D.S./PharmD/DVM) which require a deep understanding of how life operates at the molecular and cellular levels. Students who complete the BMB major are also well prepared for post-graduate study (Ph.D. and M.S. programs) in biotechnology, bioengineering, and biomedical fields, and it is the preferred program of study for students wishing to proceed into our Masters of Science in Forensic Science (MSFS) program. The 2021 program

review minima report shows we are just under the KBOR minima with an annual five-year average fall enrollment of 20.4 junior and senior students and 8.6 Bachelor of Science degrees awarded annually. Since its inception, 113 students have graduated with the BMB major. These students are employed in a variety of occupations, including physicians, medical scientists, pharmacists and biological scientists. The five-year average Career Outcomes Survey reveals 90% of our graduates are successful in securing jobs or pursuing a graduate degree within six months of graduation. Employer demand in these industries is growing. The Bureau of Labor Statistics projects a 5% change in job growth for Biochemists, and 17% growth for medical scientists. Regionally, the bioscience industry is growing and our institutional membership with BioKansas positions BMB graduates to find local employment in their field. Kansas Degree Stats showed that 67% of graduates are employed in the region.

The service the program provides to the discipline, the university, and beyond.

The BMB faculty serve on many University committees including the Undergraduate research Committee, HLC assurance review, Dean's advisory council, and curriculum review panel. Within the discipline, our faculty hold memberships in numerous professional societies including the American Chemical Society, Council for Undergraduate Research, and the Kansas Academy of Science. In addition, our faculty participate in outreach events like Enhancing Your Future and Biology Camp.

The program's cost effectiveness.

Because of the interdisciplinary nature of the program, the cost per credit hour and cost per FTE student cannot be calculated specifically. The BMB program does not incur any faculty, staff or OOE costs that are entirely allocated to it. The costs of the program are funded from the budgets of both the departments of Biology and Physical Sciences, as all courses which make up the BMB curriculum are also used to satisfy requirements for the B.S., B.A., or M.S. degrees with majors in Biology or Chemistry. BMB fills an important niche at the interface of Biology and Biochemistry. It allows us to recruit and train students who intend to pursue employment or post-baccalaureate training in a burgeoning field. Offering this program has also allowed us to recruit faculty who recognize the value of the degree and undergraduate research. In AY2020 BMB faculty acquired \$55,862 in new research grants and managed continuing grants totaling \$473,085.

Recommendation: Continue the program

26.0101 Biology BS-MS

Centrality of the program to fulfilling the mission and role of the institution.

ESU's mission is "*Preparing students for lifelong learning, rewarding careers, and adaptive leadership.*" The Biology programs contribute to this mission by providing diverse undergraduate and graduate degree granting programs. At the undergraduate level, we offer three degree programs, a Bachelor of Science in Education (BSE), a Bachelor of Arts (BA), and a Bachelor of Science (BS). Students can earn the Bachelor of Science degree in seven specific concentrations. At the Graduate level, we offer a Master of Science degree and a Master of Arts degree. This diversity of program offerings allows us to prepare students for distinct careers within the broad landscape of "Biology." Our department also contributes to the institution's mission by teaching non-majors in support of the General Education program and required courses for students in other majors. Collectively, our programs support the University Strategic Plan by providing distinctive programs and curricula that emphasize 'high-impact' learning.

The quality of the program as assessed by the strengths, productivity, and qualifications of the faculty.

The faculty of the Department of Biological Sciences are campus leaders in teaching, research, and service. Three of the past eleven Roe R. Cross distinguished professors have been awarded to Biology faculty. Among our current faculty, two were awarded the Gary Bitter Research Award and four have been recognized with the Liberal Arts and Sciences annual awards. Our faculty consist of seven tenured, eight tenure-track, and one full-time instructor whom are fully qualified by Higher Learning Commission standards and serve as members of the Graduate Faculty. A major strength of our department is the fact that 100% of our faculty are research active and involve both graduate and undergraduate students in their research programs.

The quality of the program as assessed by its curriculum and impact on students.

Exit survey five-year trend data (n=146 students) indicates very high student satisfaction with our programs. This survey asks students to reflect on their program and rate their gains in various areas. Ratings were overwhelmingly positive in each of the areas assessed: oral communication (87%), written communication (95%), technical skills (88%), quantitative skills (79%), research skills (87%), and general knowledge (92%). Written comments complimented the flexibility of our program and diversity of course offerings to meet the needs of the various sub-disciplines. The Department of Biology greatly values the impact of student participation in mentored research. Our program learning outcomes emphasize building skills in conducting biological experiments, communicating experimental results, understanding statistical analyses, and having the technical knowledge to work with modern equipment. Nothing teaches these skills better than when students perform authentic research. Many students pursue research under the guidance and direction of a mentor and several of our courses integrate research into the curriculum. This emphasis on intra and extra-curricular research produced 151 separate presentations and five publications by our students over the past five-years. Most notable was two papers on work conducted as part of our introductory, freshmen-level biology laboratory course.

Demonstrated student need and employer demand for the program.

Biology continues to be one of the most popular majors at Emporia State. The five year (2016-2020) annual average for fall undergraduate majors was 160.4 and the graduate level annual average is 30.8 students. The 2021 program review minima report shows we are exceeding KBOR minima with a five-year average of 81.4 Junior/Senior students and 29.8 Graduate students. Our 5-year trend data shows the average annual program completions at 24.8 Bachelor's degrees and 13.2 Master's degrees, respectively. Students graduating with a biology major are successful in a wide variety of jobs and post-baccalaureate training programs. The five-year average Career Outcomes Survey reveals 98% of our graduates are successful in securing jobs or pursuing a graduate degree within six months of graduation. Employer demand for Biology

majors continues to grow. According to the Bureau of Labor Statistics Biology majors occupy 35% of “healthcare practitioners” positions which include physician assistants (31% growth outlook), veterinarians (17% growth outlook), and medical assistants (18% growth outlook). Biology graduates also find work in Life Science occupations such as biological technicians (7% growth outlook), conservation scientists (7%), medical scientists (17%), microbiologists (5%) and zoologists/wildlife biologists (5%).

The service the program provides to the discipline, the university, and beyond.

The Biology program provides important service courses for other majors on campus including General Biology, Anatomy and Physiology, Microbiology, and Nutrition. Our faculty serve on many University committees including the General Education Council, the Provost’s position search committee, the Title IX Task Force, and the HLC assurance review. Within the discipline, our faculty hold memberships in numerous professional societies and serve as leaders in several scientific organizations including the Kansas Academy of Science, the Developmental Neurotoxicology Society, the Council for Undergraduate Research, The Wildlife Society (Kansas Chapter), and the Kansas Herpetological Society. Our faculty and students are also heavily invested in community outreach programs including Biology Camp and the ESU Research Institute for Science and Math Educators

The program’s cost effectiveness.

Four-year trend data show that the annual average Cost per Credit Hour over the past four years is \$235, and the average Cost per FTE Student is \$3,436. Biology faculty are also successful in securing external funding with \$1.2 million in external grant support over this time frame. Not only do sponsored projects allow our faculty to provide opportunities for student research, but they also allow us to obtain/maintain equipment and consumables that we otherwise could not afford. Much of the equipment and supplies are used in teaching, allowing us to provide training using modern equipment and current techniques. In fact, external grants provide nearly 60% of our OOE expenditures each year. These grants also provide an additional source of university revenue; Facilities and Administrative recovery over the past four years was \$208,000.

Recommendation: Continue the program

40.0501 Chemistry BS-BA

Centrality of the program to fulfilling the mission and role of the institution.

The Chemistry Program fulfills the mission of Emporia State University by providing a unique program that integrates traditional sub-disciplines within Chemistry with concurrent instruction in state-of-the-art technologies. Through exposure to multiple high-impact learning experiences (e.g. laboratory research, undergraduate laboratory teaching assistant positions, tutoring positions, field experiences, and faculty mentorship, etc.), we prepare our graduates to be life-long learners who can contribute to global sustainability through their expertise and adaptive leadership. The Chemistry program has trained many young scientists who have entered the Kansas workforce in a variety of critical positions. Our graduates contribute to the Kansas workforce through their employment with state and federal agencies, employment as chemistry educators, positions as laboratory research scientists, pharmaceutical laboratory scientists, manufacturing quality control scientists and in forensic laboratories. Chemistry graduates also pursue advanced education including graduate and professional schools such as Medicine, Dentistry, and Pharmacy.

The quality of the program as assessed by the strengths, productivity, and qualifications of the faculty.

Claudia Aguirre-Mendez (Ph.D.) – Associate Professor. She teaches our General Chemistry course, Physical Science general education course for Nurses, as well as our teacher preparation courses. She specializes in teaching through writing and argumentation. Published four papers in 2020. **Jason Applegate (Ph.D.)** – Assistant Professor. He teaches Chemistry Courses used for General Education and for majors. Class Resource Affordability Initiative Grant Recipient, and KINBRE Faculty Recruitment Package Recipient. **Andrea Luthi (Ph.D.)** – Assistant Professor. She teaches both general education and courses for majors. Heavily involved with research and mentors 5-7 students per year. Participates in “Enhancing Your Future Events” designed to promote participation in science by young girls. Organizes and trains chemistry teaching assistants each year. **Kim Simons (Ph.D.)** – Associate Professor. He teaches Chemistry courses used for General Education and for majors. Authored multiple K-INBRE Core Facility Grants. Principle Pre-Med and Pre-Pharmacy Advisor for the Department. Involved in multiple research mentorship projects with students. **Mingjing Sun (Ph.D.)** – Assistant Professor. She teaches courses used for General Education and courses for majors. Involved with K-INBRE funded student mentored research, acting as NASA-Space Grant Director, and serves in an editor for three professional journals. **Eric Trump (Ph.D.)** – Associate Professor. He teaches introductory chemistry courses and organic chemistry courses. Involved with faculty mentored research, and active with the American Chemical Society. **Qiyang Zhang (Ph.D.)** – Assistant Professor. He teaches Chemistry Courses used for General Education and for majors and actively mentors student research, regularly secures K-INBRE funding for multiple projects. He is a Class Resource Affordability Initiative Grant Recipient, active in the ACS Society, and serves as Chair-elect for the Wichita Section of the ACS. **David Whipple (M.S.)** – Instructor, Laboratory Supervisor, Chemical Safety, and responsible for Chemical Inventory.

The quality of the program as assessed by its curriculum and impact on students.

The BA Chemistry major offers concentrations in Biochemistry and Environmental Chemistry. The Biochemistry concentration is a common choice for students pursuing pharmacy school. The BS Chemistry major includes an option for an ACS Certified degree. There are also options for Medical Technology, Pre-Med, Dual-Degree Engineering (Chemical), and Chemistry Teaching Licensure. The BS & BA Chemistry major options require completion of an undergraduate research project and students must present a seminar to the department on their research. Chemistry faculty help students develop and secure funding for their research projects and provide mentorship. Many undergraduates gain additional training as they serve as laboratory teaching assistants. Chemistry graduates are regularly accepted to graduate and professional programs to continue their educations.

Demonstrated student need and employer demand for the program.

Five-year (fall 2016-fall 2020) average numbers for the major in Chemistry did not meet KBOR minima. The annual average number of junior and senior majors was 16.6. For the same time period, the average total number of majors (all classifications) was 40.2 with a maximum total number of majors in fall 2017 (48) and a minimum number of majors enrolled in fall 2018 and fall 2020 (35). Our numbers were closer to meeting KBOR minima in terms of graduates (10/yr.) with an average number of graduates of 8.8 per year. At ESU, the Chemistry, Earth Science, Physics, and Physical Sciences majors are consolidated into a single department. In addition, the interdisciplinary Biochemistry and Molecular Biology major and MS Forensic Science are shared with the Biology Department. Overall, our department totals far exceed the KBOR minima with a 5-year average number of junior and senior majors (61.4), and an average number of graduates (32.4 per year). The U.S. Bureau of Labor Statistics predicts that the demand for chemists and material scientists will increase from 2020 to 2030 by 6% and the median salaries for chemists being approximately \$79,300 and material scientists earning median salaries of \$99,460. The results from the most recent Career Outcomes Survey of ESU chemistry program graduates indicated a career outcomes rate of 85.7%.

The service the program provides to the discipline, the university, and beyond.

Our faculty teach courses that are often used to fulfill ESU General Education Science requirements. They also teach courses required or recommended for other majors. The Chemistry faculty and facilities support other programs including general education, Pre-Med, Biology, Biochemistry & Molecular Biology, Earth Science, Nursing, Pre-Pharmacy, Forensic Science, Pre-Chiropractic, Pre-Physical Therapy, Pre-Engineering, and Dual-Degree Engineering. No other program in the sciences supports such a breadth of discipline specific options, and few programs at the university are more successful in attracting high-achieving students and producing high-demand graduates.

The program's cost effectiveness.

The 4-year average annual Cost per Credit Hour for our department is \$254, and the average Cost per FTE is \$3,743. Chemistry faculty have successfully obtained external funds used to support faculty and student research from NASA-Space Grant and KINBRE. The Chemistry program is cost-effective, generating net positive revenue for the university.

Recommendation: Continue the program

09.0101 Communication BA-BFA-BS

Centrality of the program to fulfilling the mission and role of the institution.

ESU's mission is to "prepare students for lifelong learning, rewarding careers, and adaptive leadership." Through the Communication program's Bachelor of Arts and Bachelor of Science degrees, we focus on the communication, critical thinking, leadership, and teamwork skills crucial to lifelong learning and career preparation. Many courses include leadership components, and students can choose the Leadership Communication concentration. Program objectives and courses align with ESU's strategic plan including pursuing distinctive curricula initiatives, developing leadership capacities, and becoming a model for diversity, equity, and inclusion. The Communication program is the only Regents institution to offer an undergraduate degree in Leadership Communication and the only one to focus media related study on new technologies through our Communication, Emerging Technology, and Society concentration. As of spring 2021, we formally included diversity, already integral to multiple courses, as a program learning outcome. The program supports Regents' initiatives, as well. Recent curriculum revisions have focused on both providing courses and concentrations directed toward career skills and incorporating hands-on learning experiences to increase career preparedness. Faculty also support institutional and Regents' goals of reducing textbook costs for students as many courses use zero cost or Open Education Resource (OER) strategies for textbook usage. For example, Small Group Communication uses an instructor edited and adapted OER text, and as of fall 2021 all faculty teaching sections of SP101 Public Speaking have adopted an OER text.

The quality of the program as assessed by the strengths, productivity, and qualifications of the faculty.

The program's full-time faculty represent the breadth of the communication field and offer significant teaching experience. Faculty have been recognized for their excellence in teaching with awards at the college and state levels. Nearly all faculty have gone through Jumpstart Training, focused on best practices in course technology. Given the nature of the communication discipline, technology use in the classroom is prevalent and faculty keep updated on current technologies, both using and teaching those in classes. Classes taught in the Communication, Emerging Technology, and Society concentration particularly provide this aspect. Faculty actively participate in a multitude of research activities. During 2015-2020, Communication faculty presented 29 regional, national, or international conference papers, authored or co-authored eight book chapters, 13 journal articles, and five other peer-reviewed publications, in addition to other presentations, professional reviewing, and editing work. Service highlights include a faculty co-founder of the EAT Initiative, Director of the Ethnic and Gender Studies program, the 2021 recipient of the National Communication Association's Organizational Communication Division's Service Engagement Award, President of the American Forensic Association, and president of the Kansas Speech Communication Association.

The quality of the program as assessed by its curriculum and impact on students.

The Communication program offers high-quality instruction. The program recently completed a 5-year assessment process, revising program learning goals to align them with current efforts and curriculum updates (see above). The Communication program provides substantial high-impact learning opportunities throughout its curriculum, with courses focusing on student research, community engagement, and/or real-world applications. For example, students in Entrepreneurial Communication develop a new business idea to participate in the Entrepreneurial Challenge. Students in Communication in Event Planning help plan an event to raise money or awareness for a community organization, and groups in Social Media for Strategic Communication create social media plans for clients in the community. Students regularly engage in internships, and faculty supervise these internships, provide independent studies, and direct student projects, including ESURP grant recipients and McNair scholars. Each spring, our students consistently present their research at ESU's Research and Creativity Day. In both 2020 and 2021, communication students have been selected as one of only five presentations to represent ESU at the Undergraduate Research Day at the

Capitol. Students may also be inducted into Lambda Pi Eta, our nationally affiliated communication honor society. Students serve as campus leaders; for example, as ASG vice-president or president.

Demonstrated student need and employer demand for the program.

Both the 5-year averages for communication majors' junior and senior headcount (56.8) and completions (29) exceed the KBOR minima requirements. The 2019-2020 results for the Career Services Destination Survey reported a 100% career outcomes (placement) rate for communication graduates. The Communication program prepares students for a variety of careers, with employer surveys consistently ranking communication skills as highly desirable. The 2021 National Association of Colleges and Employers report indicates that 73.2% of employers are seeking strong verbal communication skills. Teamwork and leadership skills, both taught in our courses, were ranked as top 10 skills. While Communication majors have many career options, the Bureau of Labor Statistics reports that Public Relations specialists, which includes social media specialists, have a projected 11% increase in job outlook between 2020-2030, which is higher than average. Kansas Degree Stats showed that 79% of ESU Communication graduates are employed in the region with a median earnings of \$43,476 after 5-years.

The service the program provides to the discipline, the university, and beyond.

The Communication program provides valuable service. The SP100 Interpersonal Communication and SP101 Public Speaking courses are general education courses. Communication courses are electives for other majors and minors. Several courses are a part of the Ethnic, Gender, and Identity Studies major and the Ethnic and Gender Studies minor. Multiple Public Relations courses are part of the Integrated Marketing Communication minor that combines marketing and communication courses. Communication courses serve the community through workshops, facilitated discussions, and discipline related service. Faculty partner with local businesses and non-profit organizations and serve on local coalitions and councils. In 2020, the Communication program completed a 2+2 agreement with the Multimedia Design program at FHTC by offering an AAS to BS in Communication degree.

The program's cost effectiveness.

The cost of instruction is calculated for the department as a whole. The current 4-year average is \$241 per credit hour and \$3618 per student. On the Communication side of the department, full-time faculty members' load includes chairing the department and directing the nationally competitive debate team, so student credit hour production alone cannot accurately reflect instruction of students and contributions to the University.

Recommendation: Continue the program

40.0601 Earth Science BS-BA

Centrality of the program to fulfilling the mission and role of the institution.

The Earth Science program integrates traditional sub-disciplines within the geosciences with concurrent instruction in state-of-the-art technologies (Geographic Information Systems, Remote Sensing, and Global Positioning Systems) which are in high demand by employers. Through exposure to multiple high-impact learning experiences (field and lab), we prepare our graduates to be life-long learners who can contribute to global sustainability. Our program graduates contribute to the Kansas workforce through their employment with state and federal agencies (e.g. KDHE, KCC, KDOT, KS Water Office, KS Geological Survey, USDA, USGS, and EPA). Our graduates are also employed by and in some cases own private environmental consulting and oil exploration businesses in Kansas and other states.

The quality of the program as assessed by the strengths, productivity, and qualifications of the faculty.

Alivia Allison – Associate Professor – She teaches general education courses and courses for the major. She has received multiple Kathrine K. White faculty incentive grants, published two papers in the Transactions of the Kansas Academy of Sciences and worked with other faculty on a USDA funded grant project for which ESU's portion was \$110,000. She has also been heavily involved with both course level assessment and university-wide general education program assessment. **Michael Morales** – Associate Professor, Director of the Johnston Geology Museum – He teaches general education courses and courses for the major. He has served as the committee chair for seven Masters level students since 2016 and serves as the graduate coordinator for Earth Science. He has developed a fossil preparation course and a fossil preparation volunteer program to help process fossils collected on his annual summer trip to Montana. **Richard Sleezer** – Professor, Chair, Department of Physical Sciences, Co-Director – Geospatial Analysis Program. He teaches general education courses, courses for the major, and courses in Geospatial Analysis. In recent years, he has obtained funding from U.S. Fish and Wildlife Service and USDA-NRCS to support his research. **Paul Zunkel** – Assistant Professor and Co-Director – Geospatial Analysis Program. He teaches general education courses, courses for the major, and courses in the Geospatial Program. He recently authored a book chapter published by University of Nebraska Press and worked in support of Dr. Sleezer's USDA-NRCS historical aerial photography grant. Dr. Zunkel's service contributions are extensive including serving on the editorial board of Emporia State Research Studies and serving as the faculty sponsor for the Earth Science club.

The quality of the program as assessed by its curriculum and impact on students.

The major was recently restructured to make it more flexible providing students the ability to specialize in four concentration areas: Physical Geology, Environmental Geology, Atmospheric Science, and Soil Science. These changes went into effect in FY2020 and have led to increased enrollments. We anticipate additional curricular changes to adjust to the recent loss of a tenure track faculty line. Adjustments to the Geospatial Analysis minor, the Physical Geology concentration, and the Environmental Geology concentration are also in progress. Adjustments are informed by conversations with alumni and with the Kansas State Board of Technical Professions to ensure that our graduates meet their requirements to obtain professional geologist licensure and to adapt to opportunities in geodata science, carbon management, and potentially carbon sequestration.

Demonstrated student need and employer demand for the program.

Five-year average numbers for the Earth Science major didn't meet KBOR minima for the five-year assessment period (fall 2016-fall 2020), as the annual average number of Junior and Senior majors was 15.4. Note, the annual average total number of majors (all classifications) was 22.6 with a maximum total number of majors in fall 2017 (28). Our completion numbers were closer to meeting the KBOR minima of 10-graduates per year as our annual average number of graduates was 7.4 per year. In FY2020, we only graduated one student which pulled our 5-year average down significantly, as the average for the other four

years is nine, which is very close to the KBOR minima of 10. Although our program isn't large, our graduates continue to significantly contribute to the scientific workforce at the community, state, and national levels. Specific examples include: 1) Kyle Halverson, who is a professional geologist serving as the Chief Geologist at the KDOT. KDOT also employs two additional Earth Science graduates; John Barker and Julie Talkington as Geologists; 2) Elizabeth Hagenmaier who works as a Project Manager for the EPA Region 7 Office in Olathe, KS. Elizabeth was recently recognized as the EPA National Project Manager of the year for 2019 and as a 2020 ESU Outstanding Recent Graduate; 3) Alan Peterson works as a Geospatial Analyst at the KS Geological Survey; 4) Justin Abel, works at the USGS office in Lawrence, KS as a hydrologist; 5) Katlynn Decker, Logan Smith, Jesse Higginbotham, Katy Schwinghamer, Everett Spellman, Dane Boring, Brian Madeira, Kevin Faurot, and Lacey Laird all work in various capacities at the KDHE. Thirteen of our recent graduates are pursuing or have already completed graduate study at ESU or other institutions. According to the U.S. Bureau of Labor Statistics (USBLS) demand for Geoscientists is expected to grow by 7% from 2020-2030 with median annual salary of \$93,580. Some of our graduates work as Geologic and Hydrologic Technicians. The USBLS predicts 9% growth in this sector with median income of \$50,630. Many graduates work as Environmental Scientists and USBLS predicts 8% job growth in this area with median salaries of \$73,230. Some of our graduates who complete the Geospatial Analysis minor find employment as Geographers. The USBLS projects an 8% job growth in this sector with median salaries of \$85,430. Kansas Degree Stats showed that the median earnings of ESU Earth Science graduates after 5 years was \$37,440.

The service the program provides to the discipline, the university, and beyond.

The science faculty teach the general education physical science with lab course with a total annual enrollment that exceeds 150 students per semester. The Earth Science club provides students with opportunities for campus involvement and educational enrichment through community outreach events and field trips. Earth Science faculty regularly collaborate with faculty at other institutions in the State (mainly KU and KSU) and other governmental agencies, most recently US. Fish and Wildlife Service and USDA-NRCS.

The program's cost effectiveness.

The 4-year average annual Cost per Credit Hour in our department is \$254, and the average Cost per FTE is \$3,743. Earth Science faculty have successfully secured more than \$240,000 in external funding over this time frame. External support allows our faculty to provide opportunities for student research, and to obtain/maintain equipment and consumables that we otherwise could not afford.

Recommendation: Continue the program

43.0406 Forensic Science MS

Centrality of the program to fulfilling the mission and role of the institution.

The University's mission is to "prepare students for lifelong learning, rewarding careers, and adaptive leadership." The Master of Science in Forensic Science (MSFS) program has produced graduates employed in crime laboratories, academic scientific laboratories, and law enforcement agencies. Many of our graduates have advanced in their agencies and now hold senior positions. Practitioners in the field promote continuous professional development and lifelong learning to remain current in the discipline. Students regularly serve with practitioners through internships, on research committees, and in our seminar series which includes attending regional, national, and international scientific meetings. We have extended the MSFS program's reach by partnering with Simpson College in a 3+2 program and through 4+1 BS/MSFS programs in chemistry, biology, and criminalistics. Through a partnership with the Lyon County Sheriff's Office (LCSO), we provide students with high impact internships. We are currently pursuing similar partnerships with the Emporia Police Department and the Johnson County Medical Examiner's Office. Service learning includes assisting in the Citizen's Academic mock crime scene investigation in collaboration with the LCSO. The Locard Society (service organization), the Alpha chapter of Delta Epsilon (honor society), and the Ethics in Forensic Science course provide for student leadership development.

The quality of the program as assessed by the strengths, productivity, and qualifications of the faculty.

The program has three tenured/tenure-track faculty members, all credentialed with doctoral degrees. The program director has previously served as the toxicologist for the Alabama Department of Forensic Sciences. All other program non-forensic science faculty and instructors hold master or doctoral level credentials and significant experience as practitioners in their areas of expertise. These highly credentialed and experienced faculty offer dynamic, hands-on courses in molecular biology, toxicology, drug chemistry, bloodstain pattern analysis, trace evidence, firearms, botany, entomology, latent print analysis, and advanced crime scene documentation. Each tenured/tenure-track faculty member, one visiting professor, and one adjunct instructor annually supervise and mentor five graduate students with their research projects in their respective areas of expertise. During the past six years, the program core faculty (three tenured/tenure-track faculty and two instructors) have made significant disciplinary contributions including the development of 19 *de novo* courses. They have presented research findings at seventy-two regional, national, or international conferences, written eleven peer-reviewed publications, and a textbook. The majority of presentations and almost half of the publications were co-authored with students. The Faculty routinely receive continuing education through short courses, workshops, and conferences.

The quality of the program as assessed by its curriculum and impact on students.

The MSFS program curriculum is designed to align with the standards set by the Forensic Science Education Programs Accreditation Commission (FEPAC), the accrediting body for forensic science programs. The goal of our program evaluation process is continuous improvement and currency. Every year, our faculty evaluate the program for relevance, rigor, and field-specific requirements which has led to several major changes since its inception in 2015. We continuously survey current students and program graduates to gain insights for program improvements. Findings have led to the program being split into three concentrations allowing students the opportunity to gain more in-depth knowledge in their chosen specialty area. In using feedback from Kansas practitioners and crime lab directors, courses were added in postmortem toxicology, advanced crime scene documentation, and population genetics.

Demonstrated student need and employer demand for the program.

The Master of Science in Forensic Science program exceeds the KBOR minimum thresholds for both completions and program headcount. Our 5-year averages for headcount and completions were 22.8 and 10, respectively. Since 2017, ninety-four percent of our graduates are either employed in their chosen field or have continued their education within 6-months of graduation. Our graduates begin careers in private or public laboratories, academic research laboratories, law enforcement agencies, or continue their education in

doctoral or medical programs soon upon graduation. The U.S. Bureau of Labor Statistics projects the industry to grow by 6.7% by 2030. Based on May 2020 national estimates for Forensic Science Technicians, the mean annual wage is \$64,890, with the top 25% tier earnings between \$79,330 and \$100,910 per year. Kansas average wages were \$51,850 with the top 25% tier earnings between \$62,600 and \$75,930.

The service the program provides to the discipline, the university, and beyond.

The program's core faculty and instructors are active members in regional, national, and international organizations such as the American Chemical Society, the American Academy of Forensic Sciences, the Midwestern Association of Forensic Scientists, the Society of Forensic Toxicologists, and the International Association of Forensic Toxicologists. Our students participate in community service events such as the Halloween Food Drive in Emporia and the Zombie Run. We host an open house every fall that showcases our students, their research, and our facilities. Our program aids in university recruitment efforts by giving tours of our crime scene lab and research spaces to school groups and prospective students. Our lecture series has become extremely popular with the Emporia community, students, and faculty. The series invites practitioners from various disciplines to talk about cases or techniques used in the field while faculty give research and program presentations to other universities, civic organizations, and local schools.

Program's cost-effectiveness.

The Office of Institutional Effectiveness Assessment, reports a 5-year annual average cost (2015-2020) of \$235 per credit hour and \$3,436 per FTE student.

Recommendation: Continue the program

51.3801 Nursing BSN

Centrality of the program to fulfilling the mission and role of the institution.

The mission of Emporia State University is, “Preparing students for lifelong learning, rewarding careers, and adaptive leadership.” The ESU Department of Nursing (EDN) helps in fulfilling this mission by preparing students who have the knowledge, skills, and attitudes to lead others in the health care field. The program has expanded learning opportunities with a special focus on health and health care by recruiting at a technical college (ESU Strategic Plan Goal 1). The program has taken steps to increase enrollment, retention, and graduation (ESU Strategic Plan Goal 3) by staffing a Student Success Center in the department. The Department has recently expanded program offerings for an on-line Master’s in Nursing program (ESU Strategic Plan Goal 3).

The Department has inspired philanthropy as evidenced by a community member making a substantial contribution to the department’s Enhancement fund (ESU Strategic Plan Goal 4). Seventeen percent of the department’s student body identifies as Asian, Black, or Hispanic (ESU Strategic Plan Goal 5). Graduates of the department have an almost 100% job placement rate (KBOR Foresight 2020 Goal 2). The average starting salary for a newly graduated RN is approximately \$55,000 to \$60,000 which is higher than the average wage of graduates cited in the KBOR document (KBOR Foresight 2020 Goal 2). The Department has been awarded KNI grants every year since the inception of the Kansas Nursing Initiative (KBOR Foresight 2020 Goal 2). The program contributes to the pursuit of distinctiveness through its curriculum which includes courses on geriatric nursing, death and dying, preparing for the NCLEX-RN, and decision making.

The quality of the program as assessed by the strengths, productivity, and qualifications of the faculty.

Many of the nursing faculty are employed at area hospitals which enables them to keep up with the latest in health care technology. Three of the faculty members are Certified Nurse Educators. Two of the faculty members are certified as Nurse Practitioners. Many of the faculty have been trained to use the high or low fidelity simulators. Faculty members have published in a wide variety of peer-reviewed journals and presented at state, national, and international conferences. The Department maintains its distinction as a “Stellar School” by the National Student Nurses Association. The Department has received a “Certificate of Excellence” from the Kansas State Board of Nursing for its pass rate on the NCLEX-RN which exceeds the national average pass rate. Students participate in numerous service activities which include a “swab event” for DKMS to recruit donors for bone marrow transplants, blood pressure screenings, and a blood drive for the American Red Cross.

The quality of the program as assessed by its curriculum and impact on students.

The EDN has developed program outcomes that meet the criteria set by the Accreditation Commission for Education in Nursing (ACEN), the accrediting body for the department. The program has exceeded the expected levels of achievement on NCLEX-RN pass rate, program completion, and job placement for over five years. The End of Program Student Learning Outcomes were revised by the faculty in 2021 to reflect changed criteria by ACEN. The BSN program has been fully accredited by ACEN and the Kansas State Board of Nursing since 2016. The latest results from BSN students’ exit interviews in the department indicated that 95.6% were either very satisfied or satisfied with the education they received at ESU. Every year students have the opportunity to present posters at regional conferences or hospitals and this year 100% of students who graduated in December 2021 presented their posters at NRH. Students have many opportunities for high impact learning including using high fidelity simulators and rotations through Level 1 trauma centers at hospitals in Kansas. The department has an Advisory Board that meets at least once every two years. The Advisory Board was very complimentary of the department’s outcomes when it met in April 2021.

Demonstrated student need and employer demand for the program.

The BSN program exceeds the Regents minima with a current 5-year average upper-division headcount of 135.2 and a 5-year average of 41.4 completions/year. According to the Kansas Hospital Association's, *2021 KHA Workforce Survey*, there will be over 33,000 job openings for registered nursing through 2028.

According to this report, the vacancy and turnover rate for nurses was higher in 2020 than it has been since 2013. The demand for RN's is currently very high due to the pandemic, patient acuity, and nurse burnout. We no longer collect data on surveys from graduates or employers as the response rate in the past was too low to use for decision making. We require seniors to complete a written exit interview prior to graduation. According to the latest available data, of those students seeking employment after graduation, 100% had found positions.

The service the program provides to the discipline, the university, and beyond.

Faculty and students in the program volunteer at many community events. The faculty belong to several professional organizations, such as Kansas State Nurses Association, Kansas League for Nursing, and Sigma Theta Tau, which facilitate advancement of the nursing discipline. The program has non-financial contracts with many health care agencies. The program prepares graduates who fulfill jobs vital to the lives of Kansans. Health care agencies are in dire need of nurses and our program is helping meet the demand for nurses.

The program's cost effectiveness.

The Program Review Indicators for the nursing program show a 4-year annual average (FY 2017-2020) cost of \$367 per credit hour and \$5,509 per FTE student.

Recommendation: Continue the program

40.0101 Physical Sciences Grades 5-8 BSE

Centrality of the program to fulfilling the mission and role of the institution.

The Physical Sciences Bachelor of Science and Bachelor of Arts major degree programs were discontinued in fall 2014. The current program serves as a teaching licensure area option for students pursuing the Bachelor of Science degree with teaching licensure in the physical sciences. This program specifically serves students pursuing secondary education teacher preparation for licensure in Middle School Science Grades 5-8. Our Physical Sciences secondary teacher preparation program is unique in that it requires graduates to obtain at least two areas of teaching licensures from the following disciplines: Biology, Chemistry, Earth/Space Science, Physics, and Middle School Science Grades 5-8. Through exposure to multiple high-impact learning experiences (classroom, field, and lab), we prepare these graduates to be life-long learners and career educators who can contribute to global sustainability through their expertise and adaptive leadership.

The quality of the program as assessed by the strengths, productivity, and qualifications of the faculty.

The Physical Sciences faculty are appropriately credentialed and comprehensively meet Higher Learning Commission faculty qualifications requirements. The Faculty are experienced educators and productive researchers in their specific disciplines of study (Chemistry, Earth Science, Space Science, and Physics). Our faculty are also proficient in instructing department specific science teaching methods courses complementing the education preparation pedagogy training received through our highly acclaimed and accredited Teachers College. Our graduates are uniquely well prepared to fill the need for High School and Middle School Science Teachers in Kansas.

The quality of the program as assessed by its curriculum and impact on students.

The science courses taken by these students are taught by experienced scientists with terminal degrees (Ph.D. in discipline – Chemistry, Earth Science, Physics, Biology). Students are engaged in learning alongside other students majoring in Biology, Chemistry, Earth Science, and Physics. These learning experiences are congruent with those students pursuing Bachelor of Science and Bachelor of Arts degrees with a majority of common discipline specific course requirements. Thus, they become equally educated in the sciences and in teaching. They are also provided opportunities to participate in undergraduate research, and they are often employed as undergraduate teaching assistants in our laboratory courses in chemistry and physics.

Demonstrated student need and employer demand for the program.

This program does not meet KBOR minima for majors or graduates. However, it should be noted that this program is an academic support program (ASP). The average annual number of junior and senior majors is 3 per year and the average number of graduates is 1.6 per year. The U.S. Bureau of Labor statistics predicts that the overall demand for science teachers will increase by 8% during the next decade. There is currently a Science teacher shortage in Kansas. Earlier this fall 2021 there were over 1200 teaching jobs advertised on the KSDE website and currently about 712 remain unfilled. Science teachers and in particular those qualified to teach middle school science are in high demand. Kansas Degree Stats showed that 92% of ESU Physical Science graduates were employed in the region with a median earnings of \$48,734 after 5-years.

The service the program provides to the discipline, the university, and beyond.

The program doesn't offer any specific general education courses, however the general education program is supported through the discipline specific courses in Biology, Chemistry, Earth Science, and Physics that these students are required to complete. The program does provide enrollments and supports other majors in that it is one of four teaching licensure areas for which two are required to graduate from the Department of Physical Sciences with a BSE. In addition, department faculty who teach methods courses also teach discipline specific courses in the major. Students are encouraged to participate in ESU recognized student organizations (American Chemical Society Student Affiliate, Beta Beta Beta National Biology Honor Society, Biology Club, Earth Science Club, and the Kansas National Education Association-Aspiring Educators) and graduates may serve as members of the Kansas Association of Teachers of Science (KATS).

The program's cost effectiveness.

Four-year trend data indicate that the annual average Cost per Credit Hour in the Department of Physical Sciences over the past four years is \$254, and the average Cost per FTE Student is \$3,743. It is important to note that none of the classes required for this licensure area are unique to the program. All required classes are also required for other majors and/or licensure areas as well, thus the cost of this licensure area is essentially zero. However, the program is net revenue positive as students enrolled in this licensure program contribute to department and university tuition and fees revenues.

Recommendation: Continue the program

40.0801 Physics BS-BA

Centrality of the program to fulfilling the mission and role of the institution.

The Physics program and its excellent faculty and facilities have helped recruit excellent students to Emporia State University who have graduated and become engineers, doctors, laboratory researchers, medical physicists, and Ph.D.-level scholars at other universities. The program continues to fulfill the University's mission of preparing students to be lifelong learners who attain rewarding careers and participate in adaptive leadership. These faculty and graduates also exhibit the University's core values of excellence, respect, responsibility and service to Emporia State University, the City of Emporia and the State of Kansas. The Physics program has trained many young scientists who have entered the Kansas workforce in a number of critical scientific roles. The program contributes significantly to our goal of "Enhancing the competitive role of Kansas by enrolling, retaining, and graduating students ready for life and career."

The quality of the program as assessed by the strengths, productivity, and qualifications of the faculty.

Jorge Ballester – Professor – Physics, Engineering, and Space Science – He teaches PH110/111 Introduction to Space Science & Lab which fulfills an ESU Physical Science General Education requirement. He also team-teaches PS100 (Introduction to Engineering) which is the first required course in both our Pre-Engineering and Dual-Degree Engineering programs. He also teaches a variety of courses for majors, mentors undergraduate research (e.g. Summer ESURP – Galvez-Molina and Pritchard summer 2020), and also serves as a graduate advisor. Since 2016, he has served as graduate supervisor for 10 graduate students who have completed their Master of Science degrees. He also participates with "Enhancing Your Future" events promoting participation in science by 4th grade girls and in Regents Core Outcomes initiative discussions for Physics courses. He collaborated with Dr. Pettit below and Faculty from Fort Hays State University and Hutchinson Community College to obtain USDA funding for research. The ESU portion of that funding was \$120,000. **Robert Jones** – Professor – Physics – He teaches our algebra-based Physics course sequence which includes PH140/141 and PH343/344. Courses PH140/141 fulfill an ESU Physical Science General Education requirement. He also teaches courses for majors. **Christopher Pettit** – Associate Professor – Physics, Engineering, and Drone Technology – He teaches our calculus-based Physics course sequence that is taken by Physics majors and Engineering students. He also teaches advanced physics courses for majors and team-teaches PS100 (Introduction to Engineering with Dr. Ballester) and ES555 Small-Format Aerial Photography (with Dr. Allison). Pettit co-authored a paper with other ESU faculty for publication in KAS 2020 and 2019. He was a Co-PI on the USDA project mentioned above. He was also a Co-PI on a KBOR No Child Left Behind Improving Teacher Quality grant entitled "STEM Makes Academic Success Happen" in 2016. He has also reviewed three manuscripts for publication in scientific journals, serves as department's webmaster, and as the NASA JOVE computer lab manager.

The quality of the program as assessed by its curriculum and impact on students.

The State of Kansas teaching licensure program for physics was recently updated. The physics major is currently under review and faculty are creating an update plan to reinvigorate the program curricula. The Pre- and Dual-degree programs are in transition to include more opportunities to use robotics and automated instrumentation to make measurements which is consistent with industry standards in both engineering and physics. Changes to the program are informed by conversations with alumni, engineering schools, industry, and high school physics teachers to ensure that the program is both attractive to future students and that graduates are equally well-prepared for career paths in physics and engineering. Plans are being developed for a summer workshop (summer 2022) to invite physics teachers and their students to campus for a robotics workshop with the goal of establishing stronger connections with high school teachers and to enhance recruiting opportunities.

Demonstrated student need and employer demand for the program.

The five-year annual average (fall 2016-fall 2020) enrollment numbers for Physics majors did not meet KBOR minima. The annual average number of junior and senior majors (BS, BA, and BSE) was 8. For the same time period, the average total number of majors (all classifications) was 24.8 with a maximum total number of majors in fall 2016 (34). It is important to note that at ESU the following majors are consolidated into a single department (Chemistry 40.0501, Earth Science 40.0601, Physics 40.0801, and Physical Sciences 40.0101) plus the interdisciplinary Biochemistry and Molecular Biology major (26.0210) shared with the Department of Biological Sciences. In terms of department totals, we easily meet KBOR minima with a 5-year average number of junior and senior majors (61.4), and an annual average number of graduates (32.4). The U.S. Bureau of Labor statistics predicts that the demand for Physicists and Astronomers will increase by 8% from 2020-2030 with median pay of \$128,950 per year. The two most common engineering fields that our Pre- and Dual-Degree Physics and Engineering majors pursue are mechanical and civil engineering. In the next decade, the USBLS predicts that the demand for mechanical engineers and civil engineers will increase by 7% and 9%, respectively.

The service the program provides to the discipline, the university, and beyond.

The Physics program contributes to the General Education program with three course offerings that can satisfy the Physical Science & Lab requirement (PH110/111, PH140/141, and PH190/191/192). Physics courses are taken by students majoring in Biology, Earth Science, and Chemistry. They are also the core courses for the students in our Pre-Engineering and Dual-Degree engineering programs. Regular communications are maintained with engineering departments at KU, KSU, and WSU to ensure collaboration and continuity of the programs. Our graduates positively impact Kansan's quality of life as many of them have completed their programs of study and continue to live and work in Kansas.

The program's cost effectiveness.

The 4-year average annual Cost per Credit Hour in our department is \$254, and the average Cost per FTE is \$3,743. The Physics program operates efficiently as all of the Faculty teach courses taken by a variety of physical and biological science majors who take physics courses as requirements or electives in their chosen disciplines of study. This applies to both major program and general education courses. The Physics program has also made it possible for the Department of Physical Sciences to seek and obtain external funding through sources such as the U.S. Department of Agriculture and NASA, just to name two that have subsidized our efforts to support undergraduate and graduate student research.

Recommendation: Further Review

50.0501 Theatre BA-BFA

Centrality of the program to fulfilling the mission and role of the institution.

The University's mission is to "prepare students for lifelong learning, rewarding careers, and adaptive leadership." The Theatre program offers two degree options. The Bachelor of Arts provides an introduction to major facets of theatre performance, production, design, history and literature. The BA is applicable to a wide array of careers and prepares students for graduate study in theatre and related fields. The Bachelor of Fine Arts provides preparation for students desiring to become competent and knowledgeable professionals in all areas of theatre. The program supports ESU's mission's emphasis on lifelong learning and rewarding careers through its commitment to the liberal arts as an expression of culture and a path to personal growth, and through its development of knowledge and skills required for the professional practice of theatre. The Theatre program supports the goals of ESU's strategic plan in multiple ways: 1) The goal of distinctive initiatives in curricula is supported by unique, specialized paths within the BFA. 2) The goal of graduating students ready for life and career is supported by the program's success in preparing the next generation of theatre scholars, artist-educators, performers, and designers. 3) The goal of diversity, equity, and inclusion is supported by the program's emphasis on programming that confronts the complex dynamics of contemporary culture and nurtures appreciation of similarities and respect of differences.

The quality of the program as assessed by the strengths, productivity, and qualifications of the faculty.

The program's full-time faculty hold appropriate degrees and represent curricular, directorial, acting, and design aspects of the theatre field and offer significant teaching experience. Theatre faculty actively participate in course and program assessment practices to maintain effective teaching. Theatre faculty maintain vigorous creative activity through the program's theatre season, consisting of four academic year productions, plus summer theatre. Every faculty member participates through directing, producing, acting, designing, and/or technical production work. Faculty have been recognized for this creative work through awards and honors from the Region V, Kennedy Center American College Theatre Festival (KCACTF). Several faculty members engage in creative work off-campus as well, holding professional exhibits of their artwork, designing and acting in other productions, and doing voiceover work. Theatre faculty provide significant service on campus, to the profession, and to the community. Faculty have served on University-wide committees such as the Special Events Board and the Homecoming Planning Committee, and as chair of the Faculty Affairs subcommittee of Faculty Senate. Faculty members also have provided workshops for peers and students at KCACTF and served as Jester Award respondents for other institutions' productions throughout Kansas. Faculty involve themselves in the community through assistance at Emporia High School and the Emporia community theatre. The Theatre supports ESU Opera by producing their spring shows and Dr. Kevin Rabas' Short Play Festival each fall semester.

The quality of the program as assessed by its curriculum and impact on students.

The Theatre program offers high-quality instruction and theatre productions are intense high impact learning experiences. Theatre students and faculty collaborate to design, create, market and perform all productions offered to the public. Many students also serve in primary production roles as director, playwrights, and designers. The Theatre program is known for its high-quality productions, excellent student performances, and successful alumni. The seven-state regional Kennedy Center American College Theatre Festival offers examples as evidence: In 2020, eight ESU Theatre students were selected to participate in the Irene Ryan acting auditions, seven other students won awards at the final awards ceremony, and costumes from *Romeo & Juliet* were selected to participate in the costume parade. This past academic year, six student performers received nominations, three of whom will represent ESU in the Irene Ryan Acting Scholarship Competition

in January 2022. ESU Theatre alumni work at a variety of professional companies, attend graduate schools, and teach at universities and secondary schools around the country. As recently as 2019, alumnus Robbie Young received ESU's Distinguished Alumni Award. Student feedback from exit interviews highlights the opportunities the program provides through the variety of student organizations, the capstone course, and annual attendance at KCACTF. Students also remark on how they "are encouraged to take pride in their work and taught to produce work that is careful and detailed."

Demonstrated student need and employer demand for the program.

Both the 5-year averages for headcount (junior and senior) majors (24) and completions (9.2) fall just slightly below the minima requirements. The Theatre program has employed new recruiting initiatives to increase interest and enrollment in the program. The Theatre program trains students for various careers, including as actors, directors, set designers, lighting and sound designers, and stage managers. Greater diversity of entertainment media and venues and the rise of internet-only platforms have increased employment demand for many of these careers. According to the US Bureau of Labor Statistics, the demand for actors is projected to grow 32% from 2020-2030, which is much faster than average. Employment of producers and directors is expected to grow 24%, which is also "much faster than the average for all occupations." The outlook for broadcast, sound, and video technicians is expected to grow 21%. Kansas Degree Stats showed that 71% of ESU Theatre graduates are employed in the region with medium earnings of \$43,713 after 5-years.

The service the program provides to the discipline, the university, and beyond.

ESU Theatre is one of the most visible and valued aspects of the university's outreach to the community. The program's productions attract audience members from the local community, the state of Kansas, and from over 12 different states. During the truncated 2019-2020 season, 2,356 students and community members attended productions. In 2021, despite pandemic conditions, the program presented performances of five different productions, meanwhile reaching a wide audience through in-person and digital streaming methods. *The Tragedie of Macbeth*, by William Shakespeare, adapted by Dennis Turney Jr., toured to high schools in Lawrence, Topeka, Leavenworth, Goddard Eisenhower, Chanute HS, Emporia HS and Olathe during fall 2021. In addition, complimentary season tickets are donated to community organizations such as the United Way and the National Teachers Hall of Fame.

The program's cost effectiveness.

The cost of instruction is calculated for the department as a whole. The current 4-year average is \$241 per credit hour and \$3618 per student. The Theatre program generates revenue through ticket sales, sales of program advertisements, and costume rentals. The program actively solicits Theatre Guild members, alumni, and program friends to support student scholarships. This academic year, 24-students received scholarships through these donations.

Recommendation: Continue the program