

COUNCIL OF CHIEF ACADEMIC OFFICERS

Conference Call Agenda

April 18, 2018

11:00 am

CALL INFORMATION

DIAL: 785.422.6104

CONFERENCE CODE: 29079924

I. Call To Order

April Mason, Chair

II. Program Requests

- A. *Master in Health Administration (Second Reading)* WSU p. 2
- B. *Master of Science in Information Technology (Second Reading)* ESU p. 11
- C. *Bachelor of Science in Business Data Analytics (Second Reading)* ESU p. 17
- D. *Doctorate in Clinical Laboratory Sciences (Second Reading)* KUMC p. 23
- E. *Master of Science in Data Analytics (First Reading)* KSU p. 33
- F. *Degree/Program name changes*
 - *MS in Global Supply Chain Management to MS in Management Science and Supply Chain Management* WSU p. 40
 - *BS in Health Promotion to BS in Health and Human Performance* ESU p. 41

III. Other Matters

- A. *May lunch RSVP*
- B. *Communication to Tilford Planning Committee indicating next host site is on the May COCAO agenda for discussion*

IV. Adjournment

Council of Chief Academic Officers Meeting Schedule

MEETING	Location	Lunch	New Program/Degree Requests	Agenda Materials
April 18, 2018	11:00 am	Conference Call	March 7, 2018	April 2, 2018
May 16, 2018	KUMC	KUMC	April 4, 2018	April 30, 2018
June 20, 2018	Topeka	Washburn	May 9, 2018	June 4, 2018

**New Program Proposal: Summary
Wichita State University**

Master in Health Administration

<u>Criteria</u>	<u>Program Summary</u>
1. Program Identification	<p>Title of proposed program: Master in Health Administration Degree to be offered: Master's Degree Implementation Date: Fall 2018 Department(s) or unit(s): College of Health Professions, Department of Public Health Sciences Total Semester Credit Hours: 42 CIP Code: 51.0701 Modality: Online</p>
2. Program Description	<p>The online Master in Health Administration (MHA) program will prepare students in areas of management, health care finance, human resource administration, strategic planning, law and ethics, health economics, and health information systems. Students will be expected to plan, direct, manage, and coordinate medical and health services. Housed within the College of Health Professions (CHP), Department of Public Health Sciences (PHS), this program will allow aspiring health care administrators to understand the status quo of health care, as well as explore the many recent changes in care, law, regulation, and technology.</p> <p>Students seeking employment in executive health care roles benefit from holding a Master's degree for two significant reasons: 1. Master's degrees in health administration and management are preferred by employers; and 2. Students who successfully attain their MHA will be equipped with required knowledge and qualities that employers deem important to serve in an administrative capacity.</p> <p>The fully-online nature of the program will be advantageous to students who historically consist of working professionals seeking to advance their education and career potential, but require flexibility in a graduate-level program.</p>
3. Employment Demand	<p>The Bureau of Labor Statistics (BLS) projects faster-than-average growth in demand for health administration professionals due to national public health trends that will increase needs for health care management professionals. The BLS projects national employment of medical and health services managers to grow 17 percent from 2014 to 2024. In addition to the rising employment demand, the need to replace administrators who retire over the next decade will result in career opportunities.¹</p>

¹ Bureau of Labor Statistics, US Department of Labor. (2017, September 21). *Occupational outlook handbook, 2016-2017 Edition*. Retrieved from Medical & Health Services Managers: <https://www.bls.gov/ooh/Management/Medical-and-health-services-managers.htm#tab-4>

<p>3. Employment Demand <i>(continued)</i></p>	<p>Furthermore, the Education Advisory Board (EAB) conducted research regarding how institutions can capture growing and changing master's markets. The EAB market research brief entitled: "Market Demand for an Online Master's-Level Health Administration Program" reports that "national demand for master's-level health administration professionals increased 43 percent between July 2013 and June 2016" (Kanthadai, p.6).²</p>
<p>4. Local and Online Demands</p>	<p>Local Demand: A 2016 Center for Economic Development and Business Research report created for the Medical Society of Sedgwick County reported that Health Care and Related Industries are the #2 employer in the Wichita metropolitan statistical area; one in five employees worked directly in Health Care and Related Industries.³</p> <p>This proposed MHA curriculum was shared briefly at a September 2017 Kansas chapter meeting with the American College of Health Care Executives. Participants (Kansas health care executives) were invited to provide written, anonymous feedback about the value of the proposed courses and need for the MHA. More than 80% of the respondents agreed with both of the following: 1) "Would someone graduating with this degree have gained the skills your organization would value?" [to their health care systems] and 2) "Would you recommend a program like this to someone you are mentoring?"</p> <p>Online Demand: The previously referenced EAB report regarding online MHA programs also states that online programs increase enrollment both by expanding the geographic area of student recruitment and catering to working professionals who require flexible coursework.⁴</p>
<p>5. Student Demand</p>	<p>In assessing student interest in an online Master in Health Administration degree, a brief survey was conducted. Paper copies were distributed in upper-level Public Health Science classes consisting of juniors and seniors. Also, a link to the poll was sent to all undergraduate Public Health Science students via e-mail. Eighty-eight student responses were received. When asked: "Are you interested in pursuing an online Master in Health Administration program at WSU?" 86% of respondents said <u>yes</u>. When asked "How likely would you be to apply for the MHA program if it was available?" more than 50% of students indicated interest in applying.</p> <p>The level of interest and positive response exceeded faculty and administration expectations and reinforces the need and interest in this program. We anticipate high student demand for the Master in Health Administration degree from graduates of the WSU Bachelor in Health Management degree.</p>

² Kanthadai, S. (2016). *Market demand for an online master's-level health administration program: Analysis of employer demand, program characteristics, and student trends*. EAB, The Advisory Board Company.

³ Center for Economic Development and Business Research, W. Frank Barton School of Business, Wichita State University, 2016.

⁴ Kanthadai, S. *ibid*.

<p>6. Comparative /Locational Advantage</p>	<p>Among the public universities in Kansas, the University of Kansas has a similar program to the proposed MHA program; however, KU's program is a traditional in-person/hybrid program, whereas WSU is uniquely positioned to offer a fully online program, a more affordable tuition rate, and a program with fewer total required credit hours. Among private institutions, Friends University, also located in Wichita, does offer a related program in health care leadership, but with on-campus class requirements and higher tuition costs. WSU has the competitive advantage for affordability and a fully online nature that creates flexibility. The MHA program at WSU will further advance the mission of the university, to be an essential educational, cultural, and economic driver for Kansas and the greater public good; and the vision of the College of Health Professions to lead change in health care education.</p> <p>Nationally, WSU will be able to compete on affordability; as for online tuition, WSU is among the lowest in the nation, with online students paying the same tuition regardless of residency.</p> <p>WSU carefully deliberated the impact of this degree on other state institutions and did not feel it would dilute the overall quality of MHSA/MHS/MHA training available in Kansas, especially given the online appeal of the program.</p>
<p>7. Curriculum</p>	<p>The curriculum consists of 42 semester credit hours. Students must complete 36 semester credit hours of core courses which provide sufficient background of the MHA discipline and adhere to standards set forth by the accrediting body -- the Commission on Accreditation of Health Care Management Education (CAHME).</p> <p>Students must also complete 3 semester credit hours of an elective and culminate their degree with completion of a 3-semester credit hour capstone in their final semester of study.</p> <p>Existing courses comprise approximately half of the required hours, some of which will involve developing content from traditional to online instruction. The remaining courses will be newly created by faculty content experts. Coursework includes topics on management, health care finance, human resource administration, strategic planning, law and ethics, health economics, and health information systems.</p>

<p>8. Faculty Profile</p>	<p>The faculty in the Department of Public Health Sciences (PHS) possess appropriate degrees in health management and public health that are relevant and essential for the proposed Master in Health Administration program. PHS is also collaborating with content experts from The Barton School of Business to address further financial and accounting principles essential to the MHA, and content experts in Aging Studies to teach content in long-term care systems as an elective option. The faculty within the Department of PHS is also well versed in online development and administration of a fully online graduate degree program.</p> <p><u>Core Faculty in the MHA Program:</u></p> <table border="1" data-bbox="540 562 1450 779"> <thead> <tr> <th data-bbox="540 562 1234 604">Faculty</th> <th data-bbox="1234 562 1450 604"><i>FTE to Program</i></th> </tr> </thead> <tbody> <tr> <td data-bbox="540 604 1234 636">Sonja Armbruster, MPH, <i>Health Sciences Educator</i></td> <td data-bbox="1234 604 1450 636">50%</td> </tr> <tr> <td data-bbox="540 636 1234 667">Nikki Keene-Woods, PhD, <i>Associate Professor</i></td> <td data-bbox="1234 636 1450 667">25%</td> </tr> <tr> <td data-bbox="540 667 1234 699">Debbi Lehner, MBA, <i>Senior Health Services Educator</i></td> <td data-bbox="1234 667 1450 699">25%</td> </tr> <tr> <td data-bbox="540 699 1234 730">Stanly Longofer, PhD, <i>Professor</i></td> <td data-bbox="1234 699 1450 730">10%</td> </tr> <tr> <td data-bbox="540 730 1234 779">New Hire*</td> <td data-bbox="1234 730 1450 779">100%</td> </tr> </tbody> </table> <p>*The PHS Department will hire one additional faculty member in a health services educator position. The expected timeline for employment of the new faculty member will include the initiation of the hiring process early-spring 2018, with the new hire beginning August 2018. Graduate Coordinator and advising responsibilities will begin immediately upon hire, course prep and online course development will be major responsibilities in fall 2018 with teaching responsibilities of four classes/semester beginning spring 2019.</p> <p>Four additional, on-core faculty members will provide content expertise in instruction for this program.</p>	Faculty	<i>FTE to Program</i>	Sonja Armbruster, MPH, <i>Health Sciences Educator</i>	50%	Nikki Keene-Woods, PhD, <i>Associate Professor</i>	25%	Debbi Lehner, MBA, <i>Senior Health Services Educator</i>	25%	Stanly Longofer, PhD, <i>Professor</i>	10%	New Hire*	100%
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<p>9. Student Profile</p>	<p>Characteristics health care administrators typically have in common include strong communication skills, dependability, professional judgment and discretion, flexibility, organization, and analytical thinking.⁵ Opportunities to grow and develop in these areas are integrated into the curriculum.</p> <p>Given the PHS undergraduate student poll results, it is anticipated that many WSU graduates will apply to this new program; however, we also anticipate other applicants with health services management-related undergraduate degrees. Given the fully-online nature of the program, this program will also attract current, working clinical professionals seeking career advancement in health care within the Wichita area and beyond.</p>												

⁵City College (September 28, 2015). The 5 qualities of a successful health care administrator. Retrieved from <https://www.citycollege.edu/blog-healthcare/5-qualities-successful-health-care-administrator/>

<p>10. Academic Support</p>	<p>Two faculty advisors will provide general program advising for newly admitted students. A future MHA core faculty is an existing member of the PHS faculty. A position has been approved to hire an additional faculty advisor who will serve as the Graduate Coordinator. An existing full-time administrative faculty will serve as Director of Graduate Programs. Additionally, a university-trained student tutor will provide support to all MHA students.</p> <p>The existing academic support model and The Instructional Design Team at WSU is extensive and adequate in terms of supporting the new program.</p>
<p>11. Facilities and Equipment</p>	<p>Existing facilities are adequate to support the program. Additional programming necessary to complete synchronous learning will be required. New computer/printer equipment will be needed for the new hire faculty member.</p>
<p>12. Program Review, Assessment, and Accreditation</p>	<p>National accreditation through the Commission on Accreditation of Health Care Management Education (CAHME) is considered the gold standard for MHA programs. In concert with this proposal preparation, WSU will also be seeking approval to seek CAHME Accreditation to afford a clear process during the first year of the program to evaluate learning and competencies necessary for CAHME, as well as to establish the assessment measures for annual program review.</p>
<p>12. Costs/Financing</p>	<p>Start-up costs include online development funding (paid directly during year one to transition traditional coursework to online only), and new online course development, and initial program consultancy to aid program curriculum.</p> <p>Annual reimbursement includes stipends for the Director of Graduate Programs and the Graduate Coordinator; salary for the new faculty member who will serve as advisor and instructor, 4 classes/semester; and adjunct pay to teach three MHA specialty courses (e.g. health law and ethics).</p> <p>The Office of Online Learning supports this proposal and funding has been approved for FY 2018.</p>

**New Program Proposal: Curriculum Outline
Wichita State University
Master in Health Administration**

Basic Program Information

1. Title of proposed program:	Master in Health Administration (MHA)
2. Degree to be offered:	Masters Degree
3. Anticipated date of implementation:	Fall 2018
4. Responsible department(s) or unit(s):	College of Health Professions, Department of Public Health Sciences
5. Total Semester Credit Hours:	42
6. CIP Code:	51.0701
7. Modality:	Online

Course Name & Number	Semester Credit Hours
Core Courses	
MBA 800 Fundamentals of Finance and Financial Analysis	3
HA 621 Supervisory Management in Health Care Organizations	3
HA 622 Human Resources Management in Health Care Organizations	3
HA 648 Concepts of Quality in Healthcare	3
HA 802 Health Law & Ethics	3
HA 804 Health Informatics	3
HA 806 Issues and Trends in Health Professions	3
HA 808 Principles of Epidemiology	3
HA 810 Strategic Planning & Performance Analytics in Health Care	3
HA 812 Health Care Policy & Administration	3
HA 814 Health Care Leadership & Operations Management	3
HA 833 Health Economics	3
Electives (select 3 semester credit hours from among the following)	3
HA 818 Rural Health Care Leadership (3)	
AGE 710 Systems in Long-Term Care (3)	
MKT 801 Marketing Management (3)	
DS 850 Operations Management (3)	
Practicum	
HA 816 Practicum	3

Total Number of Semester Credit Hours Needed for MHA Degree **42**

Master in Health Administration Course Descriptions

MHA Core Required (39 hours)

MBA 800. Fundamentals of Finance and Financial Analysis 3 credit hours. Provides students (whose undergraduate degrees were in disciplines other than business) the accounting and finance fundamentals required for the MBA program. Topics covered include: the design and use of financial statements (including balance sheet, income statement, and statement of cash flows); analysis of companies using financial ratios; time value of money theory and calculations; investment decision rules; securities valuation; and fundamentals of capital budgeting. Prerequisites: graduate standing and permission of the MBA director.

HA 621. Supervisory Management in Health Care Organizations 3 credit hours. Cross-listed as PHS 621. This is a study of supervisory management concepts and techniques that apply to health care organizations and programs. Emphasis is on understanding the health care environment and its various health care settings, the identification of issues facing front-line employees, supervisors and mid-level managers, and the development of administrative and leadership skills necessary to successfully lead health care work teams. Topics covered include: effective management techniques, decision-making, organizing, budgeting, time management, leadership, communication, motivation, discipline, performance appraisal, management of change, teamwork, effective meetings, working with unions, quality improvement and career development.

HA 622. Human Resources Management in Health Care Organizations 3 credit hours. Cross-listed as PHS 622. This introductory course to the essential theories, components and issues of human resources management is intended for clinical health care professionals and students who have responsibility for managing people in health care organizations. Included are human resources management, recruitment, training, performance appraisal, benefits and compensation, employee relations, employee health and safety, employee assistance programs, occupational stress and job burnout, violence in the workplace and work/family issues. Through peer collaboration, students are required to analyze human resources problems and present viable solutions.

HA 648. Concepts of Quality in Health Care 3 credit hours. Cross-listed as PHS 648. Addresses quality management in health services organizations, with a focus on a systematic approach to meet the Institute of Medicine's aim to provide care that is safe, effective, patient-centered, timely, efficient and equitable. The history and status of quality management initiatives are presented. Students learn the role of quality from theory to application in a broad base of organizational settings.

HA 802. Health Law and Ethics 3 credit hours. This course introduces the student to legal, regulatory, and ethical issues related to managing health care organizations. This course is designed to provide students with the practical knowledge needed to identify legal issues inherent in health care administration and to understand the legal ramifications of administrative and management decisions. In addition to an overview of laws governing health care institutions, this course explores the ethical dilemmas facing managers and providers in these institutions.

HA 804. Health Informatics 3 credit hours. This course provides a practical overview of the evolving discipline of health informatics. The student should gain a solid understanding of information systems methodologies and approaches in the delivery and administration of modern health care systems as it relates to the delivery of efficient, high quality health care. Course activities are designed to help students understand, develop, manage, and integrate clinical and administrative information, technologies and systems to support timely and informed decision making in organizations.

HA 806. Issues and Trends in Health Professions 3 credit hours. This course will familiarize students with current trends affecting the present and projected health care delivery system. Topics covered cut across the areas of health care management and policy including personnel, patients, health care technology, organizational structures and facilities, finance mechanisms, and the role of government. This course will also address the cultural issues present in the health care environment and the professionals that work within it. This course attempts to focus on specific current and pertinent topics each given year.

HA 808. Principles of Epidemiology 3 credit hours. Cross-listed as PHS 808. An introductory graduate-level course concerning epidemiological principles and how these principles form the scientific basis for public health.

HA 810. Strategic Planning & Performance Analytics in Health Care 3 credit hours. This course provides an overview of organizational strategic planning theories and methods. Additionally, to provide services effectively and efficiently, managers need information to make decisions. This course includes study of the fundamentals of performance measurement and management systems. Measure selection, alignment with strategic plans, reporting processes, accountability and implementation of the performance management processes will be included. Case examples will focus on health care services organizations.

HA 812. Health Care Policy & Administration 3 credit hours. Cross-listed as PHS 812. An in-depth look at policy and management issues in the health system from a public health perspective. Topics include health policy, trends in the health care system, and administrative issues. Topics are critiqued with regard to public health goals, the interests of the consumers and providers, and ethics.

HA 814. Health Care Leadership & Operations Management 3 credit hours. This course focuses on the key characteristics of executive leadership within a health care organization and the responsibilities and competencies necessary for successful operations. This course will include components of self-reflection and aims to equip participants with management and leadership competencies that enable them to make a positive difference. Students will gain knowledge of some key financial and operational drivers that will prepare them for today's ever evolving healthcare environment.

HA 816. Practicum 3 credit hours. The practicum experience culminates the MHA program in the final semester of study. Practicum is an applied learning experience where students demonstrate their knowledge of various health administration competencies while gaining practical experience in a health services organization. The practicum also involves completion of a capstone project, which can focus on one or more MHA program learning outcomes. The practicum requires a minimum of 160 hours on-site with a health services organization, as well as a final presentation and portfolio submission of the capstone project. Practicum hours may be completed in the student's resident state and the final presentation and portfolio can be submitted online. Prerequisite: Instructor consent.

HA 833. Health Economics 3 credit hours. Cross-listed as PHS 833. An application of classical economic theories, principles and concepts to traditional U.S. medical care. Both the traditional and unique determinants of demand and supply considered with emphasis on the role of need for care, provider-induced demand, and health insurance. The legitimate role of government in health care is also considered.

MHA Electives (Select 3 Semester Credit Hours from the Courses Listed Below)

HA 818. Rural Health Care Leadership 3 credit hours. This course will focus upon the unique challenges experienced by health organizations in rural communities. Students will be required to comprehend certain issues facing the rural healthcare environment and leaders including provider and clinical staff shortages and recruitment, lower volume considerations, access to higher levels of care, aging facilities and limited funding. Course activities are designed to help students relate to the current state of rural healthcare and the efforts in place to improve access to care and ensure survival of this important branch of healthcare.

AGE 710. Systems in Long-Term Care 3 credit hours. Analyzes long-term care in the U.S. as a response to chronic illness and disability emphasizing the diversity of long-term care systems and addressing the needs of persons of all ages. Addresses systems and organizational aspects that affect organizational outcomes and quality of long-term care services. Considers long-term care policy and management issues. It explicitly applies a trajectory model of chronic illness, conceptualizing formal long-term care services as one series of responses to chronic illness and disability.

MKT 801. Marketing Management 3 credit hours. Develops an understanding of the difference between a sales/marketing department and a marketing orientation. Emphasizes the integral role of a marketing orientation throughout the modern organization.

DS 850. Operations Management 3 credit hours. Develops an understanding of the operations function in a business and how it interfaces with other major functions in business. Students gain an appreciation of the strategic importance of operations and how a firm can gain competitive advantage through world-class performance by operations in delivering high-quality, cost-competitive products and services. Builds a knowledge base of the concepts, tools and techniques related to designing, managing and improving operations. Helps managers, regardless functional specialization, gain an operations perspective. Prerequisites: calculus and statistics.

**New Program Proposal: Fiscal Summary
Wichita State University**

Master in Health Administration

College of Health Professions,
Department of Public Health Sciences

Part I. Anticipated Enrollment	Implementation Year		Year 2		Year 3	
	Full-Time	Part-Time	Full-Time	Part-Time	Full-Time	Part-Time
Full-time, Part-time Headcount:	10 (9hrs/sem)	0	20 (9hrs/sem)	0	37 (9hrs/sem)	0
Total SCH taken by all students in program	90/semester		180/ semester		333/ semester	
Part II. Program Cost Projection						
In <u>implementation</u> year one, list all identifiable General Restricted Use costs to the academic unit(s) and how they will be funded. In subsequent years, please include only the additional amount budgeted.						
	Implementation Year		Year 2		Year 3	
<u>Online Development</u>	\$42,000		NA		NA	
<u>Base Budget Salaries</u>	\$60,000					
Director Stipend	\$10,000					
Coordinator Stipend	\$5,000					
Adjunct	\$11,250					
Accreditation Consultant*	\$10,000				\$10,000	
Totals**	\$138,250		\$0.00		\$10,000	

*Department/college covering annual accreditation and site visit fee

**The amount does not include benefits which normally account for an additional 33% of the total salary.

Note: Students applying to the graduate school will be charged a one-time graduate school \$60 application fee. Upon program admission, a one-time \$100 program fee will be applied. The program fee will be used to fund initiatives related to the program.

- Start-up costs (include online development and equipment funding): \$42,000
- Salary for the new faculty member (who will serve as advisor and instructor): \$60,000
- Stipend for the Director of Graduate Programs: \$10,000
- Stipend for the Graduate Coordinator: \$5,000
- Adjunct salary (to teach three specialty MHA courses): \$11,250

Total for the implementation year is \$138,250. No costs are anticipated for the second year; an accreditation consultant fee of \$10,000 is the only anticipated cost for year three. The funding has been approved by and will be provided by the Office of Online Learning.

**New Program Proposal: Program Summary
Emporia State University**

Master of Science in Information Technology (MSIT)

<u>Criteria</u>	<u>Program Summary</u>														
I. Program Identification	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Title of proposed program:</td> <td>Information Technology</td> </tr> <tr> <td>Degree to be offered:</td> <td>Master of Science</td> </tr> <tr> <td>Anticipated date of implementation:</td> <td>August 2018</td> </tr> <tr> <td>Responsible department(s) or unit(s):</td> <td>School of Business</td> </tr> <tr> <td>Total Semester Credit Hours:</td> <td>36</td> </tr> <tr> <td>CIP Code:</td> <td>11.0103</td> </tr> <tr> <td>Modality:</td> <td>Online</td> </tr> </table>	Title of proposed program:	Information Technology	Degree to be offered:	Master of Science	Anticipated date of implementation:	August 2018	Responsible department(s) or unit(s):	School of Business	Total Semester Credit Hours:	36	CIP Code:	11.0103	Modality:	Online
Title of proposed program:	Information Technology														
Degree to be offered:	Master of Science														
Anticipated date of implementation:	August 2018														
Responsible department(s) or unit(s):	School of Business														
Total Semester Credit Hours:	36														
CIP Code:	11.0103														
Modality:	Online														
2. Program Description	<p>The School of Business at the Emporia State University (ESU) is proposing a 36-semester credit hour Master of Science in Information Technology (MSIT) degree program. The degree is aimed at providing a broad, all-inclusive perspective of the technology profession, and as such, will prepare the students for the technological challenges in today’s industries. This program is proposed as a science, technology, engineering, and mathematics (STEM) program offered through an Association to Advance Collegiate Schools of Business (AACSB)-accredited School of Business.</p> <p>The proposed MSIT stems, in part, from a call from ESU’s president for proposals for the ESU Incentive Plan. Under the Incentive Plan, the university provides funding for the implementation of new programs that have the potential to generate income through enrollment increases or by other means. After a review of the submitted proposals, the MSIT program was one of the proposals selected for funding. The selection of the MSIT program for funding indicates the institution considers the MSIT a priority for the university.</p>														
3. Student Demand	<p>Sufficient industry demand for the skill set found in graduates of this degree program exists. To evaluate the level of corresponding student demand for future students for this program, the current population of School of Business students (graduate and undergraduate) were surveyed; they were asked to react to a series of survey questions regarding the proposed program.</p> <p>For the undergraduate population, survey results show that 18.8% of the respondents indicate that they are <i>Likely</i> or <i>Most Likely</i> to pursue the MSIT program, if it is available. In the graduate survey, 33.33% of the respondents indicate that they would have been <i>Likely</i> or <i>Most Likely</i> to have entered the MSIT program, had it been available.</p> <p>We also asked both sample groups (undergraduate and graduate) about their perception of interest in the MSIT program among other students. The results show that 47.5% of our undergraduate sample believe that other business majors would be <i>Likely</i> or <i>Most Likely</i> to enroll in the MSIT. The graduate group believe that 72.2% of other business majors would be <i>Likely</i> or <i>Most Likely</i> to enroll in the MSIT program.</p> <p>Another result that gives us strong confidence in the program’s appeal is the low number of respondents in both the undergraduate and graduate samples who expect other business majors’ interest in the MSIT program to be <i>Not Likely at All</i> (6.1% and 0% respectively).</p>														

<p>4. Employment Demand</p>	<p>According to the Bureau of Labor Statistics, employment of computer and information technology occupations is projected to grow 13 percent from 2016 to 2026, faster than the average for all occupations. These occupations are projected to add about 546,100 new jobs. Demand for these workers will stem from greater emphasis on cloud computing, the collection and storage of big data, and information security. ¹</p> <p>The Information Systems Advisory Council at the ESU School of Business has indicated on numerous occasions the increasing local demand for technology-related skilled professionals. The Council is composed of IT executives and upper level managers from the major companies in the region. The state of the job market in Kansas reflects both global and national trends.</p> <p>Occupations related directly to this degree include database administrator, information systems manager, IT consultant, IT technical support officer, systems analyst, systems developer, post-secondary instruction, etc. Jobs where this degree would prove useful include network engineer, IT sales professional, UX analyst, and web content manager. Typical employers include information and communication technology, consulting firms, software houses, service providers, telecom companies, P-12 district and post-secondary institutions, local and central government, corporate administrative offices, National Health Service, the media, and charity foundations.</p>
<p>4. Comparative/ Locational Advantage</p>	<p>A STEM-designed program, coupled with ESU's competitive tuition rate, low student-to-faculty ratio, the School of Business' Association to Advance Collegiate Schools of Business (AACSB)² accreditation, and Emporia's comparatively lower cost of living, should prove advantageous in attracting students.</p> <p>This proposed MSIT program, delivered through ESU's AACSB-accredited School of Business, will produce much needed graduates for high-paying jobs that meet market demands for the region.</p> <p>ESU currently offers a 36-semester credit hour MBA program with an Information Systems concentration that is not a STEM-designed program (due to the preponderance of business courses in the core); this program is meritorious in its own right. However, because we do not offer a STEM-designed program, we have lost students – particularly international students – to business schools at competing universities that have STEM business programs.</p>
<p>5. Curriculum</p>	<p>The 36-semester credit hours proposed MSIT program includes 24 semester credit hours of required courses covering broad technological areas, such as database management, cloud computing, electronic commerce, and enterprise architecture. An additional 12 semester credit hours of elective courses comprise the remaining semester credit hours. The MSIT does not have internships, practica or clinical requirements. Opportunities for student interaction are integrated into the required, core courses.</p>

¹ US Department of Labor Bureau of Labor Statistics. (January 2018). Occupational outlook handbook. Retrieved from <https://www.bls.gov/ooh/computer-and-information-technology/home.htm>

² AACSB. (2015). Retrieved from <http://www.aacsb.edu/accreditation>

<p>5. Curriculum <i>(continued)</i></p>	<p>The required IT courses (24 semester credit hours): IS 813 Information Technology Project Management IS 823 Systems Analysis and Design IS 843 Electronic Commerce IS 873 Info Systems for Managerial Decision Making IS 824 Database Management IS 825 Cloud Computing & Management IS 826 Application Programming IS 828 Enterprise Architecture</p> <p>An additional 12 hours of elective courses comprise the remaining credit hours.</p>			
<p>6. Faculty Profile</p>	<p>The School of Business currently has five full-time, tenure-track Information Systems (IS) faculty who hold terminal degrees in the field. These faculty currently teach some of the courses that are part of the proposed new program. The current IS faculty body have the experience, expertise, and research interests that align with the proposed new program. One additional faculty member has been approved through the University Incentive Plan to provide additional resources for the new courses. Two-thirds of the new faculty position will be used for this proposed program.</p> <p>The current core faculty and their credentials are:</p>			
	<p>Name</p>	<p>FTE</p>	<p>Area of Specialty</p>	<p>Rank (tenure track)</p>
	<p>Juan Chavarria, Ph.D.</p>	<p>1.0</p>	<p>Information Systems</p>	<p>Asst. Prof.</p>
	<p>Javier Flores, Ph.D.</p>	<p>1.0</p>	<p>Computer Information Systems</p>	<p>Asst. Prof.</p>
	<p>Geethalaksmikanth Lakshmikanth, Ph.D.</p>	<p>1.0</p>	<p>Electrical Engineering</p>	<p>Asst. Prof.</p>
	<p>Mohammed Rahman, Ph.D.</p>	<p>1.0</p>	<p>Healthcare Information Systems</p>	<p>Asst. Prof.</p>
	<p>Douglass Smith, Ph.D.</p>	<p>1.0</p>	<p>Decision Sciences</p>	<p>Asst. Prof.</p>
<p>7. Student Profile</p>	<p>Prospective students will have a bachelor degree in the field of Business, Engineering, Computer Science, or any technology-related field. Students without appropriate background will be required to take additional prerequisite courses.</p> <p>Students interested in a STEM approach to IT education typically focus on real-world issues and problems, the engineering-design process, a hands-on inquiry and open-ended exploration, productive teamwork, knowledge of and appreciation for use of math in content learning, an exploration of multiple right answers, and allowances to reframe failure as a necessary part of learning.³</p>			
<p>8. Academic Support</p>	<p>The current School of Business infrastructure is sufficient to support the new MSIT program. The School of Business has a stand-alone advising center with one full-time individual dedicated to advising graduate students. The increase in graduate students due to the proposed program should not present any issues regarding student support. The advising center also includes two full-time individuals for undergraduate advising, a graduate assistant, and several student workers.</p>			

³ ITWorld. (June 2014). *Characteristics of successful IT professionals*. Retrieved from <https://www.itworld.com/article/2696004/careers/12-characteristics-of-successful-it-professionals.html>

9. Facilities / Equipment	<p>Because the program will not require any new facilities or equipment, the School of Business anticipates that the current facilities, library, audio-visual and academic computing resources are adequate to support the proposed program. The School of Business has two dedicated computer labs and access to another computer lab, if needed. Therefore, no additional facility, equipment, or library resource costs will be required to service the program.</p>
10. Program Review, Assessment, Accreditation	<p>The School of Business currently has assessment mechanisms to assess the quality of existing programs, as per the Association to Advance Collegiate Schools of Business (AACSB) accreditation requirements. Because the School of Business already has AACSB accreditation, the proposed MSIT program will simply be incorporated into the existing assessment structure.</p> <p>Thus, for the School of Business to maintain AACSB accreditation, assessment standards must be continuously addressed and met. On an annual basis, the assessment results are presented to faculty and used to make changes or improvements. The School of Business assessment efforts are designed to measure student performance of the learning goals presented herein.</p>
11. Costs / Financing	<p>Implementation year costs are \$87,785 (salaries), \$3,350 (marketing), \$4,740 (instructional support) -- for a total of \$95,875. The Other Operating Expense needs are provided through School of Business internal reallocation. Additional costs for year two are \$1,678 (salaries) and \$86 (instructional support); year three costs are \$1,624 (salaries) and \$88 (instructional support). Funding for the proposed program is provided by Emporia State University as part of the University Incentive Program Initiative.</p>

**New Program Proposal: Curriculum
Emporia State University
Master of Science in Information Technology (MSIT)**

Basic Program Information

1. Title of proposed program:	Information Technology
2. Degree to be offered:	Master of Science
3. Anticipated date of implementation:	August 2018
4. Responsible department(s) or unit(s):	School of Business
5. Total Semester Credit Hours:	36
6. CIP Code:	11.0103
7. Modality:	Online

Course Name / Number

Semester Credit Hours

Core Courses

IS 813	Information Technology Project Management	3
IS 823	Systems Analysis and Design	3
IS 843	Electronic Commerce	3
IS 873	Info Systems for Managerial Decision Making	3
IS 824	Database Management	3
IS 825	Cloud Computing & Management	3
IS 826	Application Programming	3
IS 828	Enterprise Architecture	3
Total for Core Courses		24

Elective Courses (Select 12 Semester Credit Hours from Among the Following):

CS 564	Network Defense & Countermeasure	3
CS 565	Computer Forensics	3
IS 503	Data Mining	3
IS 827	Advanced Application Programming	3
IS 805	Special Topics in Information Systems	3
IS 853	Business Analytics	3
IS 863	Enterprise Resource Planning	3
Total for Elective Courses		<u>12</u>

Total for Master of Science in Information Technology (MSIT) Degree **36**

**New Program Proposal: Financial Summary
Emporia State University
Master of Science in Information Technology (MSIT)**

Basic Program Information

- | | |
|--|------------------------|
| 1. Title of proposed program: | Information Technology |
| 2. Degree to be offered: | Master of Science |
| 3. Anticipated date of implementation: | August 2018 |
| 4. Responsible department(s) or unit(s): | School of Business |
| 5. Total Semester Credit Hours: | 36 |
| 6. CIP Code: | 11.0103 |
| 7. Modality: | Online |

Part I. Anticipated Enrollment	Implementation Year		Year 2		Year 3	
	Full-Time	Part-Time	Full-Time	Part-Time	Full-Time	Part-Time
A. Full-time, Part-time Headcount:	15		30		30	
B. Total SCH taken by all students in program	270 (assuming 9 SCH per student <i>per semester</i>)		540 (assuming 9 SCH per student <i>per semester</i>)		540 (assuming 9 SCH per student <i>per semester</i>)	
Part II. Program Cost Projection						
A. In <u>implementation</u> year one, list all identifiable General Use costs to the academic unit(s) and how they will be funded. In subsequent years, please include only the additional amount budgeted.						
	Implementation Year	Year 2		Year 3		
<u>Base Budget</u> Salaries & Benefits	\$87,785	\$1,592		\$1,624		
<u>OOE</u> Instructional Support	\$ 4,740	\$ 86		\$ 88		
Marketing	\$ 3,350	\$ 0		\$ 0		
Total	\$95,875	\$1,678		\$1,712		

Faculty salary is based on one new faculty member hired with two-thirds of assignment allocated to the MSIT program; new faculty position is provided through the ESU Incentive Plan. Under the Incentive Plan, the university provides funding for the implementation of new programs that have the potential to generate income through enrollment increases or by other means. Increases in salary are based on a 2% raise per year. Other Operating Expenses (OOE) are from School of Business reallocation.

**New Program Proposal: Program Summary
Emporia State University**

Bachelor of Science in Business Data Analytics

<u>Criteria</u>	<u>Program Summary</u>
1. Program Identification	<p>Title of proposed program: Business Data Analytics Degree to be offered: Bachelor of Science in Business Anticipated date of implementation: August 2018 Responsible department(s) or unit(s): School of Business Total Semester Credit Hours: 120 CIP Code: 52.1301</p>
2. Program Description	<p>The School of Business at Emporia State University (ESU) is proposing a new Bachelor of Science in Business major in Business Data Analytics (BDA). The new BDA program will produce data scientists for the State of Kansas.</p> <p>The Business Data Analytics program is schematically organized so students will be exposed to core data analytics concepts and techniques. The degree is aimed at providing a comprehensive set of knowledge and skills required for becoming a state-of-the-art data scientist. This new undergraduate degree will prepare students for the latest information-oriented technological challenges.</p> <p>The proposed Business Data Analytics degree stems, in part, from a call for proposals from Emporia State University’s president, Allison Garrett. President Garrett encouraged all university units to submit proposals that would attract students, improve performance and enhance the reputation of ESU. After a review of the submitted proposals, the Business Data Analytics program was one of the proposals selected by President Garrett for funding. The selection of the Business Data Analytics program for funding indicates the institution considers the BDA a priority for the university.</p>
3. Student Demand	<p>Sufficient industry demand for the skill set found in graduates of this degree program exists.</p> <p>To evaluate the level of corresponding student demand for future students for this program, we emailed our current population of School of Business students (graduate and undergraduate) and asked them to react to a series of survey questions. For the undergraduate population, our survey results show that 29% (37.8% for graduate students) of the respondents indicate that they are <i>Likely</i> or <i>Most Likely</i> to have majored in Business Data Analytics, had it been available. Another result that gives us strong confidence in the program’s appeal is the low level of negativity. Only 5% (undergraduate) and 0% (graduate) of respondents expect other business majors’ interest in the BDA major to be <i>Not Likely at All</i>.</p>
4. Employment Demand	<p>“Data analytics is a hot new career field” (¶ 1).¹ The Data Scientist has been identified as the best job among the twenty-five Best Jobs in America for 2016,</p>

¹ Rutgers. (2018). Master of business and science degree: Data analytics jobs & skills in demand 2016. Retrieved from <https://mbs.rutgers.edu/articles/data-analytics-jobs-skills-demand-2016>

<p>4. Employment Demand (continued)</p>	<p>according to Glassdoor.² The Business Data Analytics degree will cater to this market.</p> <p>In the past two years, the Information Systems Advisory Council at the ESU School of Business has indicated the increasing local demand for data analytics professionals. The Council is composed of IT executives and upper level managers from the major companies in the region. The state of the job market in Kansas reflects both global and national trends. The proposed new bachelor of science program is organized in such a manner, so that students will be exposed to core data analytics concepts and techniques. The degree is aimed at providing a comprehensive set of knowledge and skills requires for becoming a state-of-the-art data scientist. This new undergraduate degree will prepare the students for the latest information-oriented technological challenges.</p> <p>A sampling of data analytics job titles includes Business Intelligence Developer, Business Intelligence Analyst, Data Scientist, Intelligence Analyst, Software Development Engineer, Data Engineer, Data Analyst, and Business Analyst. Top employers advertising data analytics jobs in the United States include Amazon, UnitedHealth Group, Blue Cross, Oracle, JP Morgan Chase, Wells Fargo, PricewaterhouseCoopers, American Express, Verizon, AT&T, General Electric, IBM, Capital One, Aetna, Travelers Insurance, Comcast, Johnson & Johnson, and Motorola.</p> <p>According to Forbes.com, IBM predicts demand for Data Scientists will soar 28% by 2020.³</p>
<p>5. Comparative /Locational Advantage</p>	<p>Given that none of the Kansas Regents public universities currently have a Bachelor of Science degree program in Business Data Analytics, this proposed BDA program at the Emporia State University will produce much needed graduates to meet the market demands for the region.</p> <p>This new BDA program will be part of the Science, Technology, Engineering and Math (STEM) Program, which benefits all students, including international students. Additionally, this new Business Data Analytics undergraduate program has potential for international joint programs with our international AACSB accredited university partners; such affiliations could certainly result in a lucrative revenue stream.</p> <p>The BDA program also promotes distinctive academic programs to advance the university's reputation.</p>
<p>6. Curriculum</p>	<p>The proposed BDA program includes 24 hours of courses in Business Data Analytics and 42 hours of courses in the traditional business core, plus 48 hours to fulfill ESU's general education requirements and 6 hours of university general electives. Opportunities for student interaction are integrated into the required, core courses.</p> <p>In addition to the 48-university general education program semester credit hours, the 42-business core semester credit hours, and the 6-university general elective</p>

² Piatetsky, G. KD Nuggets. Referenced Glassdoor. Retrieved from <https://www.kdnuggets.com/2017/01/glassdoor-data-scientist-best-job-america.html>

³ Kauflin, J. (July 20, 2017). Forbes. *The five most in-demand skills for data analysis jobs*. Retrieved from <https://www.forbes.com/sites/jeffkauflin/2017/07/20/the-five-most-in-demand-skills-for-data-analysis-jobs/#610b8e922c7c>

6. Curriculum (continued)	<p>semester credit hours, students will be required to take 6 business electives and 18 data analytics courses (the latter listed below).</p> <p>Required Data Analytics Courses -- semester credit 18 hours IS 333 Business Computer Systems Analysis (Currently offered in BSB-IS) IS 413 Database Concepts (Currently offered in BSB-IS) IS 453 Business Intelligence (Currently offered in BSB-IS) IS 503 Data Mining (Proposed new course) IS 513 Big Data Analytics (Proposed new course) IS 533 Data-driven Decision Making (Proposed new course)</p>																											
7. Faculty Profile	<p>The School of Business currently has five full-time, tenure-track Information Systems (IS) faculty members who hold terminal degrees in the field. These educators currently teach some of the courses that are part of the proposed, new program. The current IS faculty body have the experience, expertise, and research interests that align with this program.</p> <p>One additional faculty member with a terminal degree in the field will be hired using internal funds to support the program, with an expected hire date prior to the beginning of the Fall 2018 semester. One-third of the new faculty member's assignment will be dedicated to the Business Data Analytics program.</p> <table border="1" data-bbox="456 877 1451 1163"> <thead> <tr> <th data-bbox="456 877 776 947">Name</th> <th data-bbox="776 877 932 947">Highest Degree(s)</th> <th data-bbox="932 877 1019 947">FTE</th> <th data-bbox="1019 877 1451 947">Area of Specialty</th> </tr> </thead> <tbody> <tr> <td data-bbox="456 947 776 982">Juan Chavarria</td> <td data-bbox="776 947 932 982">Ph.D.</td> <td data-bbox="932 947 1019 982">1.0</td> <td data-bbox="1019 947 1451 982">Information Systems</td> </tr> <tr> <td data-bbox="456 982 776 1018">Javier Flores</td> <td data-bbox="776 982 932 1018">Ph.D.</td> <td data-bbox="932 982 1019 1018">1.0</td> <td data-bbox="1019 982 1451 1018">Computer Information Systems</td> </tr> <tr> <td data-bbox="456 1018 776 1087">Geethalaksmikanth Lakshmikanth</td> <td data-bbox="776 1018 932 1087">Ph.D.</td> <td data-bbox="932 1018 1019 1087">1.0</td> <td data-bbox="1019 1018 1451 1087">Electrical Engineering</td> </tr> <tr> <td data-bbox="456 1087 776 1123">Mohammed Rahman</td> <td data-bbox="776 1087 932 1123">Ph.D.</td> <td data-bbox="932 1087 1019 1123">1.0</td> <td data-bbox="1019 1087 1451 1123">Healthcare Information Systems</td> </tr> <tr> <td data-bbox="456 1123 776 1163">Douglass Smith</td> <td data-bbox="776 1123 932 1163">Ph.D.</td> <td data-bbox="932 1123 1019 1163">1.0</td> <td data-bbox="1019 1123 1451 1163">Decision Sciences</td> </tr> </tbody> </table>				Name	Highest Degree(s)	FTE	Area of Specialty	Juan Chavarria	Ph.D.	1.0	Information Systems	Javier Flores	Ph.D.	1.0	Computer Information Systems	Geethalaksmikanth Lakshmikanth	Ph.D.	1.0	Electrical Engineering	Mohammed Rahman	Ph.D.	1.0	Healthcare Information Systems	Douglass Smith	Ph.D.	1.0	Decision Sciences
Name	Highest Degree(s)	FTE	Area of Specialty																									
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Douglass Smith	Ph.D.	1.0	Decision Sciences																									
8. Student Profile	<p>Data scientists require high critical thinking and problem-solving abilities. We expect high-achieving students with keen interests in technology to enroll for this major.</p> <p>Students interested in this major typically exhibit the following characteristics⁴: strong analytics aptitude, curiosity, hypothesis-driven, motivated, and structured problem-solver. Other sources reference similar traits, and one thing they all have in common is that the student must have a passion for business and data.</p>																											
9. Academic Support	<p>Current ESU School of Business infrastructure is sufficient to support the new Business Data Analytics program.</p> <p>Additionally, the School of Business has a stand-alone advising center with two full-time individuals dedicated to advising undergraduate students.</p>																											
10. Facilities and Equipment	<p>The School of Business anticipates that the facilities are adequate to support the proposed program. The School of Business has two dedicated computer labs and access to another computer lab, if needed. Several new software tools and packages will be required that are mostly available for free by large corporations (e.g. IBM, Microsoft, Oracle, Cisco, etc.) for academic use purposes.</p>																											

⁴ Piyanka, Jain. (May 28, 2016). *Forbes.5 characteristics of the analytics hero*. Retrieved from <https://www.forbes.com/sites/piyankajain/2015/05/18/5-characteristics-of-the-analytics-hero/#6ae574ea176f>

<p>11. Program Review, Assessment, Accreditation</p>	<p>The University and the School of Business currently have assessment mechanisms in place to assess the quality of existing programs. As the new program will be introduced as an Association to Advance Collegiate Schools of Business (AACSB) accredited program, the School of Business will be required to apply existing AACSB assessment protocols to the new program. For the School of Business to maintain AACSB accreditation, assessment standards must be continuously addressed and met. On an annual basis, the assessment results are presented to faculty and used as data points to make changes or improvements.</p>
<p>12. Costs, Financing</p>	<p>Funding for the proposed program is provided by Emporia State University (as part of the University Incentive Program Initiative). Costs for the implementation year total \$47,006 (\$43,022 for salaries/benefits and \$3,984 for other operating expenses). Additional money for year two totals \$1,041, and \$843 for year three.</p>

**New Program Proposal: Curriculum
Emporia State University**

Bachelor of Science in Business Data Analytics

Basic Program Information

- | | |
|--|---------------------------------|
| 1. Title of proposed program: | Business Data Analytics |
| 2. Degree to be offered: | Bachelor of Science in Business |
| 3. Anticipated date of implementation: | August 2018 |
| 4. Responsible department(s) or unit(s): | School of Business |
| 5. Total Semester Credit Hours: | 120 |
| 6. CIP Code: | 52.1301 |

Course	Semester Credit Hours
University General Education Program	48
University General Electives	6
Business Core	42
Business Data Analytics Major Courses	24
<i>Required BDA Courses – 18 semester credit hours</i>	
<i>IS 333 Business Computer Systems Analysis (Currently offered in BSB-IS)</i>	
<i>IS 413 Database Concepts (Currently offered in BSB-IS)</i>	
<i>IS 453 Business Intelligence (Currently offered in BSB-IS)</i>	
<i>IS 503 Data Mining (Proposed new course)</i>	
<i>IS 513 Big Data Analytics (Proposed new course)</i>	
<i>IS 533 Data-driven Decision Making (Proposed new course)</i>	
<i>Electives BDA – Select 6 semester credit hours from the following:</i>	
<i>IS 343 Web-Based Business Applications (Currently offered in BSB-IS)</i>	
<i>IS 393 Advanced Web-Based Applications (Currently offered in BSB-IS)</i>	
<i>IS 433 Operating Systems Concepts (Required for Data Security Minor)</i>	
<i>IS 473 Telecommunications & Networking (Currently offered in BSB-IS)</i>	
<i>CS 564 Network Defense and Countermeasures (Currently offered in BSB-IS)</i>	
<i>CS 355 UNIX (Currently offered in BS-CS)</i>	
<i>CS 565 Computer Forensics (Required for Data Security Minor)</i>	
<i>IS 523 Cloud Computing (Proposed new course)</i>	

Total Required for Degree Completion 120

**New Program Proposal: Fiscal Summary
Emporia State University**

Bachelor of Science in Business Data Analytics

Basic Program Information

- | | |
|--|---------------------------------|
| 1. Title of proposed program: | Business Data Analytics |
| 2. Degree to be offered: | Bachelor of Science in Business |
| 3. Anticipated date of implementation: | August 2018 |
| 4. Responsible department(s) or unit(s): | School of Business |
| 5. Total Semester Credit Hours: | 120 |
| 6. CIP Code: | 52.1301 |

Part I. Anticipated Enrollment	Implementation Year		Year 2		Year 3	
	Full-Time	Part-Time	Full-Time	Part-Time	Full-Time	Part-Time
A. Full-time, Part-time Headcount:	20		40		60	
B. Total SCH taken by all students in program	600 (assuming 15 SCH per student per semester)		1200 (assuming 15 SCH per student per semester)		1800 (assuming 15 SCH per student per semester)	
Part II. Program Cost Projection						
A. In <u>implementation</u> year one, list all identifiable General Use costs to the academic unit(s) and how they will be funded. In subsequent years, please include only the additional amount budgeted.						
	Implementation Year		Year 2		Year 3	
<u>Base Budget</u> Salaries & Benefits	\$43,022		\$ 999		\$800	
<u>OOE</u> Faculty/Instructional Support Marketing	\$ 2,334 \$ 1,650		\$ 42 \$ 0		\$ 43 \$ 0	
Total	\$47,006		\$1,041		\$843	

Indicate source and amount of funds if other than internal reallocation:

One additional faculty member with a terminal degree in the field will be hired using internal funds to support the program, with an expected hire date prior to the beginning of the Fall 2018 semester. One-third of the new faculty member's assignment will be dedicated to the Business Data Analytics program.

Request Approval for a Doctorate in Clinical Laboratory, University of Kansas Medical Center

Universities may apply for approval of new academic programs following the guidelines in the Kansas Board of Regents Policy Manual. The University of Kansas Medical Center has submitted an application for approval of a Doctorate in Clinical Laboratory. The proposing academic unit has responded to all the requirements of the program approval process. No Kansas Board of Regents' institutions have doctorate programs utilizing this Classification of Instructional Program (CIP) code. The Review Team's final report has been submitted and the University of Kansas Medical Center has responded. Staff recommends approval.

<u>Criteria</u>	<u>New Degree Program Proposal: Summary</u>
1. Program Identification & CIP	<p>Doctorate in Clinical Laboratory</p> <p>Science CIP: 51.1005</p>
2. Academic Unit	<p>School of Health Professions, Department of Clinical Laboratory Sciences</p>
3. Program Description	<p>Open to individuals holding a national certification as medical laboratory scientist, graduates from this program will provide consultative services to patients and healthcare teams, or they may choose to enter academic positions in clinical laboratory science. Clinical laboratory scientists are a crucial component of the health care team, as seventy to eighty percent of a physician's medical decisions are based on data generated by the clinical laboratory, and new Federal requirements mandate that test results be available to patients.</p> <p>Working with a rapidly expanding laboratory test menu and increasing test complexity, clinical laboratory scientists provide consultation to patients, physicians, and other members of the healthcare team. The proposed program is designed to address these needs by providing doctoral-level training and advanced practice in Clinical Laboratory Science (CLS), as well as by building upon the existing strengths of our nationally-accredited CLS program.</p>
4. Demand/Need for the Program	<p>With intensified analyses and a rapidly expanding test menu, there is a need for doctoral-level training in Clinical Laboratory Science (CLS) to provide consultative services to both patients and healthcare providers. In a survey of physicians, it was found that speed and accuracy of diagnosis was increased in 70-80% of their cases when interpretation of laboratory results was provided (Hickner, et al.).</p> <p>Individuals with extensive clinical laboratory expertise will dramatically improve patient outcomes and reduce costs. Unfortunately, the lack of doctorly-prepared clinical laboratory scientists is a barrier to the availability of interpretation of complex testing panels. Implementing this program will overcome this barrier, as well as address an unmet need in the state of Kansas (and nationwide) for doctorly-trained CLS professionals.</p> <p>In 2008, a survey of 299 randomly chosen early career CLS's indicated that 65% were interested in pursuing a doctorate in clinical laboratory science (DCLS) (Doig & Beck). In 2009, a similar survey was sent nationally. Out of 1452 respondents, 61% indicated an interest in pursuing a DCLS with 23% of them indicating a desire to start as soon as possible (Nadder). Implementing this program will address both the need and demand for doctoral-level training in CLS.</p>

<p>5. Comparative/ Locational Advantage</p>	<p>Nationally, only two universities (Rutgers University, NJ; University of Texas Medical Branch, TX) offer the DCLS. As a leading academic medical center that focuses on patient outcomes with a team-based health-care delivery approach, KUMC is an ideal location for this innovative program.</p> <p>The CLS program at KUMC has been in existence since 1933 and continuously accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) for over 50 years. Our BS in CLS graduates have an outstanding pass rate on national certification exams, and the program benefits from the high density of clinical facilities in the Kansas City metropolitan region. The success and reputation of our BS in CLS program will allow for effective establishment of clinical residency partners for the DCLS program. Additionally, the emphasis on interprofessional education amongst the healthcare disciplines at KUMC will provide unique opportunities for collaborative education prior to the clinical residency. Therefore, KUMC is uniquely positioned to offer this Doctoral degree program.</p>
<p>6. Curriculum</p>	<p>The 76-credit hour program consists of advanced graduate core courses, a research project, and a clinical residency. The core courses provide foundational knowledge needed for professional practice, including clinical correlations, test utilization, evidence-based practice, and quality assurance. The advanced courses encompass the six subspecialties of clinical laboratory science (chemistry, immunology, hematology, immunohematology, microbiology, & molecular diagnostics). The research project requires students to synthesize and integrate knowledge and apply theories and principles learned across the curriculum, and will include a written thesis as well as an oral defense. In the clinical residency, the students are provided the opportunity for professional practice by delivering consultative services to patients and healthcare teams.</p>
<p>7. Faculty Profile</p>	<p>All faculty involved in the proposed program are certified clinical laboratory scientists and/or possess advanced degrees in disciplines that are directly associated with clinical laboratory science. The CLS Department currently has nine faculty members, most of whom hold nationally recognized clinical laboratory certification. The CLS faculty who will teach in the DCLS program are: Eric Elsinghorst, PhD, MPH, MLS(ASCP)MB^{cm}, Research Associate Professor; Renee Hodgkins, PhD, MT(ASCP), Clinical Assistant Professor; Jan Hudzicki, PhD, MLS(ASCP)SM^{cm}, Clinical Associate Professor; and WenFang Wang, PhD, C(ASCP)^{cm}, Clinical Assistant Professor. Due to two vacancies, the CLS Department is currently recruiting new faculty members to fill these positions with a Summer 2017 start date.</p> <p>The faculty, and their departmental affiliation, currently identified as instructing DCLS core curriculum courses offered by other departments are: Glendon Cox, MD, MHSA, BA. Department of Health Policy & Management; Gregory Reed, PhD. Department of Pharmacology, Toxicology & Therapeutics; Steven LeVine, PhD. Department of Molecular & Integrative Physiology; Babalola Faseru, MD, MPH. Department of Preventive Medicine & Public Health; and Christopher Crenner, MD, PhD. Department of History & Philosophy of Medicine.</p> <p>Professionals mentoring students at clinical sites will be affiliated with the program through adjunct faculty appointments in the Department of Clinical Laboratory Sciences.</p>
<p>8. Student Profile</p>	<p>The proposed program requires that applicants possess national certification as a medical laboratory scientist (MLS[ASCP]) and Bachelor's degree in CLS or an appropriate life science. It is required that applicants have work experience as a medical laboratory scientist.</p>

9. Academic Support	Students enrolled in the program will be assigned to a five-member advising committee which will be responsible for guiding each student through the program requirements. Students will meet with these advisors on a regular basis. The current academic support services available at KUMC are sufficient to support the proposed program.
10. Facilities & Equipment	New facilities or equipment will not be needed for the proposed program.
11. Program Review, Assessment, Accreditation	Accreditation of the program will be sought through the National Accrediting Agency for Clinical Laboratory Sciences. The proposed program will be systematically reviewed and evaluated through survey and evaluation instruments that solicit feedback from students, graduates, residency sites, and employers. Program assessment will incorporate responses from the various evaluation instruments, as well as student coursework grades and outcomes of the thesis defense required for degree completion. Based on these measures, curricular changes will be implemented. The effectiveness of any change will be monitored through continued evaluation of student outcomes. A national certification exam for the DCLS is currently being developed. Graduates' performance on this exam will be included as part of the program process improvement.
12. Cost, Financing	Operating expenses for the proposed program will come from the existing budget of the Department of Clinical Laboratory Sciences, KUMC School of Health Professions. Two additional doctoral-level faculty are required in addition to the two vacancies. The two vacancies will be funded by the existing budget for the Clinical Laboratory Sciences Department. The salaries for the two additional faculty will be provided by the University.

References

- Hickner, J., et al. (2014). Primary care physicians' challenges in ordering clinical laboratory tests and interpreting results. *The Journal of the American Board of Family Medicine*, 27(2), 268-274.
- Doig, K., & Beck, S. (2008). Surveys of support for the doctorate in clinical laboratory science. *Clin Lab Sci*, 21(2), 92.
- Nadder, T. (2011). Results from an interest survey on the professional doctorate degree in CLS. *ASCLS Today*, 25(4), 13-14.

**Curriculum Outline
New Degree Program
Kansas Board of Regents**

I. Identify the new degree: Doctorate in Clinical Laboratory Science

II. Provide courses required for each student in the major:

<u>Course Name & Number</u>	<u>Semester Credit Hours</u>
<u>Core Courses</u>	
CLS 800 Advanced Topics	3
CLS 802 Principles of Healthcare Education (3), or MICR 805 Teaching in Higher Education (3)	3
CLS 805 Advanced Molecular Diagnostics	2
CLS 815 Research Methods in Clinical Laboratory Sciences	2
CLS 820 Evidence Based Practice	3
CLS 830 Advanced Clinical Chemistry	3
CLS 836 Advanced Hematology	3
CLS 838 Advanced Immunology/Transplant	3
CLS 842 Advanced Microbiology	3
CLS 844 Advanced Immunohematology	3
CLS 851 Clinical Correlations I	3
CLS 852 Clinical Correlations II	3
CLS 880 DCLS Interprofessional Practice	2
CLS 890 Advanced Laboratory Operations	3
BIOS 704 Principles of Statistics in Public Health	3
HP&M 810 Health Care System	3
PHCL 898 Principles of Pharmacology	1
PHSL 843 Physiology of Disease	3
PRVM 800 Principles of Epidemiology	3
PRVM 853 Responsible Conduct of Research	1
<u>Research</u>	
CLS 901 DCLS Research I	2
CLS 902 DCLS Research II	3
CLS 903 DCLS Research III	3
CLS 999 DCLS Capstone	1
<u>Practica</u>	
CLS 911 DCLS Residency I	4
CLS 912 DCLS Residency II	5
CLS 913 DCLS Residency III	5
 Total:	 <u>76</u>

**Fiscal Summary
New Degree Program
Kansas Board of Regents**

Proposed Program: Doctorate in Clinical Laboratory Science
Implementation Year: Academic Year 2019-2020, Fiscal Year 2020

Part I. Anticipated Enrollment	Implementation Year		Year 2		Year 3		Year 4		Year 5	
	Full-Time	Part-Time	Full-Time	Part-Time	Full-Time	Part-Time	Full-Time	Part-Time	Full-Time	Part-Time
A. Full-time, Part-time head-count:	2	2	6	6	11	10	14	14	15	18
B. Total SCH taken by all students in program:	74		236		412		537		618	

Part II. Program Cost Projection					
A. In implementation year one, list all identifiable General Use costs to the academic unit(s) and how they will be funded. <u>In subsequent years, please include only the additional amount budgeted.</u>					
	Implementation Year	Year 2	Year 3	Year 4	Year 5
Costs: Salaries/Fringe	\$93,100	\$93,100	NAAB	NAAB	NAAB
OOE	\$1,200	NAAB	NAAB	NAAB	NAAB
Total	\$94,300	\$93,100	NAAB	NAAB	NAAB

NAAB = No additional amount budgeted.

Indicate source and amount of funds if other than internal reallocation:

Salaries/Fringe: As described in the “Program Faculty” section of this proposal, the CLS Department is filling two vacancies, the funds for which are in the current CLS budget. In addition to filling these vacancies, two additional new faculty will be required to support the program. The salary and fringe costs associated with new faculty hiring will be supported by KUMC. By the fourth year of the program, the net income realized through tuition will more than offset the cost of new faculty salary and benefits. OOE. The OOE costs will be supported by the reallocation of existing resources. OOE costs will be ongoing each year, but without requiring additional amounts budgeted, so are shown in the “Implementation Year” only.

University of Kansas Doctorate in Clinical Laboratory Science Proposal External Review

The KUMC External Review Committee:

Maribeth Laude Flaws, Ph.D., *Chair of the KUMC External Review Committee*
Chairperson, Department of Medical Laboratory Science
Program Director, Medical Laboratory Science Program
Rush University Medical Center
Chicago, Illinois

Nadine A. Fydryszewski, Ph.D.
Interim Vice Chair of the Department of Clinical Laboratory Sciences
Program Director of the Clinical Laboratory Science program
Rutgers Biomedical Health Sciences -School of Health Professions
Rutgers University
Newark, New Jersey

Jose H. Salazar, Ph.D.
Clinical Assistant Professor
Department of Clinical Laboratory Sciences
Special Member of the Graduate Faculty, Graduate School of Biomedical Sciences
School of Health Professions
University of Texas Medical Branch at Galveston
Galveston, Texas

We find that the proposed program meets all standards and we recommend approval of the proposed program by the Board of Regents.

1. Program Justification

The proposed program is central to the mission because it will educate health care professionals in the form of doctoral-prepared clinical laboratory scientists (DCLS) to serve the needs of Kansas, the region and the nation. In addition, the training of these students will support the institution's mission of providing exceptional patient care by providing health care professionals who can consult with members of the healthcare team on test utilization and interpretation resulting in the reduction of unnecessary and inappropriate testing, ultimately decreasing healthcare costs. The proposed program also fulfills the mission of the institution by providing education for the workforce at various levels adding the doctoral level to the Bachelor of Science in Clinical Laboratory Science (CLS) and Master of Science in Molecular Biotechnology programs that are already offered at the University of Kansas Medical Center (KUMC). Finally, as related by the Vice Chancellor for Academic Affairs and the Executive Vice Chancellor/Executive Dean of the School of Medicine, the addition of the DCLS program to KUMC serves to satisfy the innovation component of the mission by offering a program that is only offered by two other institutions in the country to prepare practitioners for a completely new role on the healthcare team.

There are many advantages to offering the proposed program at KUMC including the existence of an entry-level CLS program that is well-established such that the institution can offer a continuum of education to the CLS professional. KUMC also has a strong program in using simulation for learning with plans developed for integrating the DCLS student. Interprofessional Education (IPE) is a strength of the educational experience at KUMC according to the Vice Chancellor for Academic Affairs, and the DCLS student will be appropriately incorporated into the learning environment with medical, nursing, and pharmacy students just as they will be in the workforce. The future DCLS student will find a high quality educational experience evidenced by the cooperation of other departments offering courses in the proposed program. In fact, the chairpersons of two programs offering clinical doctorates at KUMC expressed support for the program and looked forward to the integration of the DCLS student into IPE and simulation learning experiences with their students. Further advantages of KUMC offering the program, include its experience offering other clinical doctorates, the presence of experienced faculty, and the close working relationships that exist with employers of healthcare professionals including the future DCLS graduates.

According to the Vice Chancellor for Academic Affairs, one of the goals of the institution is to increase health professions programs and the Executive Vice Chancellor/Executive Dean of the School of Medicine stated that this program would raise the clinical laboratory scientist to the same academic level as other healthcare professionals. The Vice Chancellor for Academic Affairs stated that they had investigated offering this program at other Kansas state institutions, but the same resources were not available at those institutions and thus resources have been committed at KUMC to offer this program. The Dean of Graduate Studies confirmed that support was available for students and faculty of the new doctoral program. Finally, the Dean of the School of Health Professions stated that the school is committed to offering high quality programs and sees this program as meeting a need in the profession and in health care for an advanced practice clinical laboratory science practitioner. The development of this program ranks high in the list of priorities for the School of Health Professions because of the need in the workforce for someone with these skills and because training practitioners for a new role on the healthcare team satisfies the mission to be innovative.

ii. Student Demand

The program anticipates having eleven full-time and ten part-time students enrolled by year three which is more than double that required by the Board of Regents for a doctoral program. These numbers are based on published survey data of current laboratory professionals and their desire to gain additional education and expand their scope of practice while remaining in the profession. Discussions with current KUMC CLS students support the determination of projected enrollment numbers. Currently, there are only two other DCLS programs in the country and published studies estimate that there are over 700 certified laboratorians who would be interested in a DCLS degree. Thus, student demand for this program is high and there is little competition.

The characteristics of potential students are appropriate for the degree, i.e. a certified MLS who has completed a NAACLS-accredited program and has 3 years of work experience. CLS graduates of the KUMC program have stated the desire to obtain a graduate degree and many have completed other graduate programs because the DCLS is not available. By offering the DCLS, KUMC can keep those students in the profession and at KUMC. Three recent graduates of the KUMC CLS program and one current student stated that they are interested in enrolling in the DCLS program and in conversations with colleagues and classmates find additional interested applicants. The prospective students talked about the role the DCLS will play on the healthcare team not just in Kansas but around the world. They were excited to be on the ground-floor of a new opportunity for

the profession and recognized that they would have to carefully carve out their niche without impinging on other professions' scopes of practice. They also stated that by offering the DCLS, the KUMC B.S. in CLS program would benefit because students would see the full career ladder.

As far as demand for graduates of this program, the Associate Director of the KUMC Pathology Residency program, the Director of Pathology and Laboratory Medicine for the KU Health System, two representatives from local reference laboratories and the President of the Kansas Society of Pathologists all agreed that these graduates could not come soon enough. They all see the need for higher degree and advancement opportunities for laboratory professionals and have already identified the niche in their organizations and in the community that can be filled by the KUMC DCLS graduate. The Veteran's Administration is already developing a job description for this person. The void in clinical pathology for advanced practice laboratorians is vast and can be filled by the DCLS-prepared graduate. Rural laboratories as well as large urban medical centers already have opportunities for the employment of these graduates and there won't be graduates for at least four years. Discussion with potential employers identified some of the possible roles for the KUMC DCLS graduate:

- Consultant to healthcare providers in urban and rural settings
- Provide clinical oversight of laboratory test utilization
- Participating on diagnostic management teams who will help clinicians more appropriately manage and treat their patients
- Clinical laboratory director
- Educate patients and healthcare providers on laboratory test interpretations and improve health literacy
- Participate in the justification of new laboratory tests and business models
- Perform research on test utilization to include cost savings and increase patient safety and satisfaction
- Contribute toward the economics of healthcare and reimbursement for services
- Partner on complicated genetic counseling cases
- Work for managed care organizations or other healthcare management companies
- Participate on insurance company utilization teams providing insight into medical necessity of laboratory tests
- Entrepreneurs as laboratory directors of many smaller rural and urban laboratories

2. Curriculum of the proposed program

The curriculum of the proposed program is appropriate and is comparable in credit hours, curriculum and clinical residency to the two existing programs and to the proposed guidelines for curriculum and competencies set forth by the American Society for Clinical Laboratory Science (ASCLS) Doctorate in Clinical Laboratory Science Oversight Committee and the accreditation guidelines for the DCLS program established by the National Accrediting Agency for Clinical Laboratory Sciences. Sufficient clinical sites are available for the initial cohort of students at KUMC and into the foreseeable future; industry laboratory personnel expressed support for serving as training sites as did the Veterans Administration representative in the future as needed.

The proposed curriculum will provide advanced theory courses in clinical laboratory science along with research and a clinical residency. Existing courses in other departments at KUMC will be incorporated into the

DCLS curriculum maximizing the use of resources to include, statistics, health care system, pharmacology, physiology and epidemiology. After completion of the proposed program, it is expected that the graduate will have the advanced training necessary for interpretation of complex testing panels, address appropriate clinical utility and correlate test results with patient's symptomology to provide real-time clinical decision support.

3. Program Faculty

The proposed faculty for the DCLS program are all well qualified, experienced educators who have advanced degrees in clinical laboratory science and appropriate specializations. The KUMC CLS Department currently has four faculty who will be involved in teaching the CLS courses in the DCLS program. Two additional faculty will be recruited with one starting in September 2018 and the second in Summer 2019. The two new faculty will hold a doctoral degree and have appropriate laboratory certification. The KUMC administration has committed to providing the funding for the two new faculty hires in the CLS department. Since other KUMC Ph.D. faculty will be teaching in the proposed program the number of doctoral faculty exceeds the required number. No graduate assistants will be used to educate students in the proposed program.

4. Academic Support

KUMC currently has sufficient academic resources to support the proposed program such that additional resources will not be needed. Library resources are sufficient as are supporting staff.

5. Facilities and Equipment

The facilities and equipment currently available at KUMC are sufficient to support the needs of the students and faculty of the proposed program. Two new offices will be needed for the two additional faculty members. The simulation and classroom facilities are more than adequate for the new program.

6. Program Review, Assessment and Accreditation

The program has identified an appropriate process for program review and assessment such that appropriate data regarding the success of the program will be gathered and analyzed. There are plans to survey students, faculty, graduates and employers about the degree of satisfaction with the program and preparation for the workforce. Outcomes of graduates will be tracked to include employment and when available, success on a national certifying exam. The program plans to seek accreditation from NAACLS.

In conclusion, we find that all provisions set forth by the Kansas Board of Regents for the approval of new academic programs have been met. We find that the KUMC DCLS program as planned has the resources necessary, the commitment of institutional leaders, a well-developed, complete and appropriate curriculum, and sufficient experienced faculty to successfully train students for a new career opportunity in laboratory medicine and on the healthcare team.

March 16, 2018

Max Fridell, Ph.D.
Director, Academic Affairs
Kansas Board of Regents
1000 SW Jackson Street, Suite 520
Topeka, Kansas 66612

Dear Dr. Fridell:

Thank you for forwarding to me the External Reviewer Report for the proposed DCLS program. We greatly enjoyed hosting the review team and I thank them for their thorough review of our proposal. I concur with their findings, and look forward to the continued review of our proposal.

Sincerely,

Eric Elsinghorst, PhD, MPH, MLS(ASCP)^{CM}MB^{CM}
Chair and Program Director
Department of Clinical Laboratory Sciences

New Program Proposal: Program Summary
Kansas State University
Master of Science in Data Analytics

<u>Criteria</u>	<u>Program Summary</u>
1. Program Identification	Degree: Master of Science in Data Analytics (MS-DA) Implementation date: Fall Semester 2018 Total Semester Credit Hours: 30 CIP code: 52.1301
2. Academic Unit	College of Business Administration
3. Program Description	<p>The College of Business Administration is proposing a new Master of Science in Data Analytics (MS-DA) degree in order to address the increasing need for data scientists. This graduate program will be offered in collaboration with the Departments of Computer Science, Economics, Mathematics, Industrial Management and Systems Engineering, Statistics, and Geography; it will focus on using advanced technologies to manipulate big data,¹ utilizing rigorous methods to interpret the data, and obtaining the business skills necessary to translate understanding into actionable organizational strategies.</p> <p>This collaborative curriculum will provide students with the necessary skills and knowledge to find secure, professional jobs, provide companies scientific and systematic methods of decision-making, and provide involved faculty members opportunities to improve their professional and research skills by applying techniques to real business issues.</p>
4. Student Demand	<p>Advisors have repeatedly indicated a need and a desire for this program stemming from consultations with students representing various fields, including computer science, statistics, mathematics, economics, engineering, and, especially, business.</p> <p>Accordingly, we can project a conservative demand for this proposed degree program to be 20 full-time and 5 part-time three years after implementation.</p> <p>The proposed program targets recent undergraduate and graduate students from different disciplines (engineering, computer science, mathematics, and science), K-State staff, and young professionals with the need to develop skills of data analytics at work. The impact on current MBA program enrollment should be minimal, as the two programs target very different groups of students, with very different curricula. Furthermore, the experience from other, similar, graduate programs suggests there will be international students applying for this degree program, as well.</p>
5. Employment Demand	<p>“Data analytics is a hot new career field that includes a wide range of jobs involving some combination of statistics and computing, as well as other skills” (¶ 1).² Forbes indicated that data analytics and statistics seem “to be making their way onto every avenue in the workforce” (¶ 1).³ A sampling of data analytics job titles includes Business Intelligence Developer, Business Intelligence Analyst, Data</p>

¹ Rouse, M. (2017). *Big data analytics*. Tech Target Retrieved from: <http://searchbusinessanalytics.techtarget.com/definition/big-data-analytics>

² Rutgers. (2018). *Master of business and science degree: Data analytics jobs & skills in demand 2016*. Retrieved from <https://mbs.rutgers.edu/articles/data-analytics-jobs-skills-demand-2016>

³ Kauflin, J. (July 20, 2017). Forbes. *The five most in-demand skills for data analysis jobs*. Retrieved from <https://www.forbes.com/sites/jeffkauflin/2017/07/20/the-five-most-in-demand-skills-for-data-analysis-jobs/#610b8e922c7c>

	<p>Scientist, Intelligence Analyst, Software Development Engineer, Data Engineer, Data Analyst, and Business Analyst.</p> <p>Firms' demands for professionals with data analytics skills and knowledge are increasing (e.g., employment in all computer occupations is expected to increase by 22% by 2020, according to the U.S. Bureau of Labor Statistics)⁴ and academia is responding to the demands by developing new techniques and providing data analytics courses at undergraduate and graduate levels. According to McKinsey & Company's <i>Big Data Report</i>, by 2018, the United States alone could face a shortage of 140,000 to 190,000 people with deep analytical skills. The study also projects that the U.S. needs 1.5 million data-savvy managers and analysts who can manage and analyze large datasets, and utilize the findings in their decision making.⁵</p> <p>In 2016, there were 295,755 master's level jobs nationally in the most common target occupations for data analytics graduates. These jobs are expected to grow by 8.6% over the next five years. Over 1.2M jobs requesting these skills have been posted during the last three years. The national job market is quite strong for master's level graduates in data analytics. The median salary is \$103,320.⁶</p> <p>Education Advisory Board (EAB) recently published a webinar with additional findings on Data Analytics.⁷ They did an extensive search on jobs that were not specific to data analysis or data science, but that were requesting some level of expertise in these areas for other positions. EAB reports that there were an additional 400,000 job listings that could fit this description in 2016, and that jobs requesting some level of data analytics skills, in non-data analytics professions, grew by 24% in the last three years. When considered regionally within Kansas and surrounding states, there were 591 completions and to 1723 openings in 2016; the average salary for all-experience levels slightly trails the rest of the United States at \$96,820.⁸ The national entry-level salary for a data analyst, depending on location, ranges from \$40,475 to 78,217.⁹ The median entry-level salary without bonuses or fringe benefits is \$56,062.¹⁰</p>				
<p>6. Comparative/ Locational Advantage</p>	<p>Currently, there are no other universities in the Kansas Board of Regents System offering graduate, cross-discipline degrees in data analytics. (University of Kansas offers a Graduate Business Analytics Certificate.) A comparison of master's degree analytics programs from institutions in bordering states is provided below.</p> <table border="1" data-bbox="430 1331 1412 1415"> <thead> <tr> <th data-bbox="430 1331 711 1415">University</th> <th data-bbox="711 1331 1003 1415">Program</th> <th data-bbox="1003 1331 1120 1415">Total Hours</th> <th data-bbox="1120 1331 1412 1415">Remark</th> </tr> </thead> </table>	University	Program	Total Hours	Remark
University	Program	Total Hours	Remark		

⁴ Sieben, K. (2016 February). *Monthly Labor Review. Labor markets in 2040: big data could be a big deal for jobseekers*. U.S. Bureau of Labor Statistics. Retrieved from: <https://www.bls.gov/opub/mlr/2016/article/labor-markets-in-2040-big-data-could-be-a-big-deal-for-jobseekers.htm>

⁵ Manyika J., et al. (May 2011). *Big data: The next frontier for innovation, competition, and productivity*, McKinsey Global Institute. Retrieved from: <http://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/big-data-the-next-frontier-for-innovation>

⁶ Sieben. Ibid.

⁷ Educational Advisory Board (EAB). (2018). *Creative disruption: Data analytics capitalizing on the rise of data analytics*. Retrieved from: <https://www.eab.com/research-and-insights/continuing-and-online-education-forum/events/webconferences/2018/creative-disruption-data-analytics>

⁸ Educational Advisory Board (EAB). (2018). *Creative disruption: Data analytics capitalizing on the rise of data analytics*. Retrieved from: <https://www.eab.com/research-and-insights/continuing-and-online-education-forum/events/webconferences/2018/creative-disruption-data-analytics>

⁹ PayScale (2018). Retrieved from: https://www.payscale.com/research/US/Job=Data_Analyst/Salary/6d51ed9b/Entry-Level-Data-Analysis

¹⁰ Ibid.

	<table border="1" data-bbox="430 205 1416 579"> <tr> <td>Rockhurst University</td> <td>MS in Bus Intelligence & Analytics</td> <td>30</td> <td>No data science courses</td> </tr> <tr> <td>U of Missouri - Columbia</td> <td>MS in Data & Analytics</td> <td>34</td> <td>No data science courses</td> </tr> <tr> <td>Iowa State University</td> <td>MS of Business Analytics</td> <td>30</td> <td>No data science courses</td> </tr> <tr> <td>Oklahoma State University</td> <td>MS in Business Analytics</td> <td>33-37</td> <td>No data science courses</td> </tr> <tr> <td>U of Colorado – Boulder</td> <td>MS in Business Analytics</td> <td>33</td> <td>No data science courses</td> </tr> </table> <p data-bbox="430 617 1425 949">This MS-DA proposed degree program is unique, combining courses from various disciplines that cover both data science and applied analytics. Such an integrated curriculum, that offers the students flexibility in choosing a courses that fit their interests and background, should be attractive to students interested in data analytics. Kansas State University is well-positioned to offer a graduate-level major in data analytics. Companies interested in cost reduction, faster and better decision-making, and gauging customer needs for new products and services are eager for skilled personnel, and K-State’s proposed graduate level major will provide companies with a much needed resource, resulting in excellent, high-paying careers for our students, within the State of Kansas, nationwide, and internationally.</p>	Rockhurst University	MS in Bus Intelligence & Analytics	30	No data science courses	U of Missouri - Columbia	MS in Data & Analytics	34	No data science courses	Iowa State University	MS of Business Analytics	30	No data science courses	Oklahoma State University	MS in Business Analytics	33-37	No data science courses	U of Colorado – Boulder	MS in Business Analytics	33	No data science courses				
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7. Curriculum	<p data-bbox="430 974 1372 1037">The Master of Science in Data Analytics degree program requires 30 hours of coursework. This includes::</p> <ul data-bbox="477 1041 909 1108" style="list-style-type: none"> • 21 hours of required courses and • 9 hours of specified electives. <p data-bbox="430 1113 1388 1176">Opportunities for student interaction and research are embedded throughout the program.</p>																								
8. Faculty Profile	<p data-bbox="430 1203 1412 1360">Faculty in existing departments and colleges across the university will teach and coordinate the curriculum. There are a total of 19 tenured/tenure-track faculty members (6 for required/core courses and 13 for electives) involved in teaching this program. Because all program courses (both cores and electives) are currently offered, there are no additional course or faculty resources required.</p> <p data-bbox="430 1365 1429 1465">Core courses come from five different departments: Computer Science (CS), Economics (ECON), Industrial and Manufacturing Systems Engineering (IMSE), Management (MANGT), and Marketing (MKTG). Core faculty include:</p> <table border="1" data-bbox="422 1497 1437 1873"> <thead> <tr> <th>Name/Degree</th> <th>Tenure Status/Title</th> <th>Dept</th> <th>Academic Specialization</th> </tr> </thead> <tbody> <tr> <td>William Hsu, Ph.D.</td> <td>Tenured, Professor</td> <td>CS</td> <td>CIS 730, CIS 798/731, CIS 732</td> </tr> <tr> <td>Yoon-Jin Lee, Ph.D.</td> <td>Non-tenured, Assistant Professor</td> <td>ECON</td> <td>ECON 630</td> </tr> <tr> <td>Shing I Chang, Ph.D.</td> <td>Tenured, Professor</td> <td>IMSE</td> <td>IMSE 785</td> </tr> <tr> <td>Roger McHaney, Ph.D.</td> <td>Tenured, Professor</td> <td>MANGT</td> <td>MANGT 830</td> </tr> <tr> <td>Bongsug Chae, Ph.D.</td> <td>Tenured, Professor</td> <td>MANGT</td> <td>MANGT 665, MANGT 670</td> </tr> </tbody> </table>	Name/Degree	Tenure Status/Title	Dept	Academic Specialization	William Hsu, Ph.D.	Tenured, Professor	CS	CIS 730, CIS 798/731, CIS 732	Yoon-Jin Lee, Ph.D.	Non-tenured, Assistant Professor	ECON	ECON 630	Shing I Chang, Ph.D.	Tenured, Professor	IMSE	IMSE 785	Roger McHaney, Ph.D.	Tenured, Professor	MANGT	MANGT 830	Bongsug Chae, Ph.D.	Tenured, Professor	MANGT	MANGT 665, MANGT 670
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	<table border="1"> <tr> <td>Jaebeom Suh, Ph.D.</td> <td>Tenured, Associate Professor</td> <td>MKTG</td> <td>MKTG 880</td> </tr> </table> <p>Non-core faculty come from the following departments: Marketing, Accounting, Finance, Management, Geography, Economics, Computer Information Systems, Mathematics, and Statistics.</p>	Jaebeom Suh, Ph.D.	Tenured, Associate Professor	MKTG	MKTG 880
Jaebeom Suh, Ph.D.	Tenured, Associate Professor	MKTG	MKTG 880		
9. Student Profile	<p>The proposed program targets recent undergraduate and graduate students from different disciplines, K-State staff seeking professional development, and young professionals with the need to develop skills of data analytics at work. The experience from other, similar graduate programs in the region also suggests there will be international students applying for this degree program.</p> <p>Students interested in this major typically exhibit the following characteristics¹¹: strong analytics aptitude, curiosity, hypothesis-driven, motivated, and structured problem-solver. Other sources reference similar traits, and one thing they all have in common is that the student must have a passion for business and data.</p>				
10. Academic Support	<p>Academic services at KSU, including advising, library, audio-visual, laboratory, and academic computing resources, are sufficient to support this program. All academic support available at Kansas State University and in the College of Business will be available for students and faculty in the Master of Science – Data Analytics program.</p> <p>Library material, including electronic subscriptions to the most relevant journals and databases, are sufficient for the proposed program. Current support staff in the College of Business (technology support consultants, instructional support specialists, development officers) is sufficient for the proposed program.</p>				
11. Facilities/ Equipment	<p>The School of Business anticipates that the facilities are adequate to support the proposed program; no new facilities or equipment will be needed to implement this new major.</p>				
12. Program Review, Assessment, Accreditation	<p>The MS-DA will be subject to continuous review by graduate faculty in the Graduate Innovative Curriculum Committee of the College of Business Administration. Faculty will be invited to raise issues and help solve problems. Students will be asked to complete surveys at the mid-point and conclusion of their program to help faculty address student concerns and make changes or improvements. Data from the surveys and student assessments will be aggregated, reported, and used for program refinement and improvement.</p> <p>The program will also be subject to accreditation review by the Association to Advance Collegiate Schools of Business (AACSB); AACSB, considered the gold-standard of business school accreditation,¹² is a non-governmental accrediting agency that oversees the standardization of collegiate schools of business and accounting nationwide.</p> <p>The Graduate Curriculum Committee will review assessment results annually within two weeks of the conclusion of the Spring semester. Additionally, the Graduate Curriculum Committee will review the exit survey results and assessment results during its annual meeting and provide suggestions to improve the program.</p>				

¹¹ Piyanka, Jain. (May 28, 2016) *5 characteristics of the analytics hero*. Forbes Retrieved from <https://www.forbes.com/sites/piyankajain/2015/05/18/5-characteristics-of-the-analytics-hero/#6ae574ea176f>

¹² Get Educated (2017). *AACSB accredited MBA: Pros and cons*. GetEducated.com. Retrieved from: <https://www.geteducated.com/online-mbas/94-do-i-need-an-aacsb-accredited-online-mba>

13. Costs/ Financing	Implementation year reallocated salaries for six faculty members amounts to \$19,589. This cost will be covered by reallocating salary expenses from other departments. There are no new costs in salaries; there are no other operating expenses costs in the implementation year; there are no additional money requests for years two and three.
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**New Program Proposal: Curriculum Outline
 Kansas State University
 Master of Science in Data Analytics**

Basic Program Information

- | | |
|---|---|
| 1. Title of proposed program: | Master of Science in Data Analytics |
| 2. Degree to be offered: | Master of Science in Data Analytics (MS-DA) |
| 3. Anticipated date of implementation: | Fall Semester 2018 |
| 4. Responsible department or unit: | College of Business |
| 5. Total Number of Semester Credit Hours: | 30 |
| 6. CIP code: | 52.1301 |

I. Required Core Courses:

Course Name & Number	Semester Credit Hours
CIS 798/731: Programming Techniques for Data Science & Analytics	3
ECON 630 Intro to Econometrics	3
IMSE 785: Big Data Analytics	3
MANGT 830: Information Technology Strategy and Application	3
MIS 665: Business Analytics and Data Mining	3
MIS 670: Social Media Analytics and Web Mining	3
MKTG 880: Applied Marketing Analytics	<u>3</u>

Total Semester Credit Hours of Core Courses: **21**

II. Specified Elective Courses: *(Students are to select three courses from the electives listed below):*

Course Name & Number	Semester Credit Hours
CIS 730: Principles of Artificial Intelligence	3
CIS 732: Machine Learning and Pattern Recognition	3
CIS 751: Computer and Information Security	3
CIS 833: Information Retrieval and Text Mining	3
MATH 725: The Mathematics of Data and Network I	3
MATH 726: The Mathematics of Data and Network II	3
STAT 717: Categorical Data Analytics	3
STAT 730: Multivariate Statistical Methods	3
ACCTG 856: Accounting Analytics	3
ECON 686: Economic Forecasting	3
FINAN 623: Financial Modeling	3
GEOG 608: Geographic Information Systems II	3
GEOG 712: Internet GIS and Distributed Geographic Information Services	3
GEOG 728: Topics in Programming for Geographic Analysis	3
GEOG 808: Geocomputation	3
MANGT 662: Procurement, Logistics and Supply Chain Design	3
MKTG 881: Advanced Marketing Analytics	<u>3</u>

Total Semester Credit Hours of Elective Courses: **9**

Total Semester Credit Hours for Program **30**

New Program Proposal: Fiscal Summary
Kansas State University
Master of Science in Data Analytics

Basic Program Information

- | | |
|---|---|
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Part I. Anticipated Enrollment	Implementation Year		Year 2		Year 3	
	Full-Time	Part-Time	Full-Time	Part-Time	Full-Time	Part-Time
A. Full-time, Part-time Headcount:	3	2	10	5	20	5
B. Total SCH taken by all students in program	75 (=3*21 + 2*6)		240 (=10*21 + 5*6)		450 (=20*21 + 5*6)	
Part II. Program Cost Projection						
A. In <u>implementation</u> year one, list all identifiable General Use costs to the academic unit(s) and how they will be funded. In subsequent years, please include only the additional amount budgeted.						
	Implementation Year		Year 2		Year 3	
<u>Base Budget</u>	\$19,589.00 *		0		0	
Salaries	<i>(reallocated; no new cost)</i>					
OOE	0		0		0	
Total	\$19,589.00 *		0		0	
	<i>(reallocated; no new cost)</i>					

Notes:

- * Costs for salaries for six faculty members will be reallocated from other programs/departments.
- No new courses are offered; no new faculty lines are required. There are no new costs in salaries; there are no other operating expenses costs in the implementation year; there are no additional money requests for years two and three.

April 2, 2018

TO: Jean Redeker
Vice President for Academic Affairs
Kansas Board of Regents

FROM: Rick Muma
Interim Provost and Professor

REQUEST: Degree Title Change

This is a request for change in degree title. Please place on the next available COCAO agenda. We are requesting a change in the degree name for the MS in Global Supply Chain Management as outlined below.

Current
Degree: MS in Global Supply Chain Management
CIP: 52.1399
Program Code: MS_SCM

New
Degree: MS in Management Science and Supply Chain Management
CIP: 52.1399
Program Code: MS_SCM

The name change is intended to better reflect the content of the degree and will enable the program to be classified as a STEM program.

If you require further information, please contact me at the telephone number below or email me at richard.muma@wichita.edu.

Thank you.

March 28, 2018

TO: Max Fridell
Director, Academic Affairs

FROM: David P. Cordle 
Provost and Vice President for Academic Affairs

RE: BS in Health Promotion Name Change

Emporia State University wishes to rename of Bachelor of Science in Health Promotion to the Bachelor of Science in Health and Human Performance. The rationale for changing the name of our undergraduate “Health Promotion” program to “Health and Human Performance” has three primary components:

- 1) The terminology used in the fields of Corporate Wellness and Community Health has evolved. Whereas the focus used to be on motivating healthy behavior change for employees, attention is now given to “human performance” and teaching employees the skills they need to achieve optimum health and perform their best in terms of productivity and safety.
- 2) Due to curriculum revisions, the program now qualifies students for wider array of careers upon graduation. With the addition of courses in fitness and exercise science, the curriculum now qualifies students for additional jobs, particularly in the fields of Personal Training and Strength & Conditioning.
- 3) Curriculum revisions have also transformed the program into a viable pre-professional program. With a curriculum focused on the human body, the program now provides a viable pathway to graduate study in cardiac rehabilitation, physical therapy, occupational therapy, and chiropractic.

Please add this to the COCAO agenda.