Attachment 2

Academic Affairs

Discussion Agenda Supplemental Information

University Honors Program

Pages 2-6

Interdisciplinary Secondary Major in Global Food Systems Leadership

Pages 7-10 (overview)

Pages 11-29 – detailed proposal

College of Education – Master of Arts in Teaching

Pages 30-31 (overview)

Pages 32-62 – detailed proposal

School of Applied Science and Technology – Professional Science Master in Applied Science and Technology

Pages 63-66 (overview)

Pages 67-112 – detailed proposal

University Honors Program

University Honors Program ~~K-State's University Honors Program provides exceptional students with an understanding of contemporary concepts of common and diverse intellectual traditions, as well as discipline-specific knowledge and abilities. Our community of scholars will possess global awareness and competence in dealing with an increasingly diverse world, having had educational experiences that emphasize scholarship, critical thinking, and intellectual curiosity. Students in the program will possess superior written and oral communication skills and will become active participants in the lively discourse of today's world.~~	**University Honors Program** The University Honors Program, or the UHP, encourages students to grow in the intellectual craft of scholarship. Through cultural and performing arts events, skill-development workshops, travel opportunities, and challenging course work, UHP students will increase their intellectual curiosity about the world, its wonders and its complexity. The UHP will challenge students to reach their full potential as scholarly, competent and fulfilled leaders.
Admission requirements The general criteria for admission to the ~~university honors program~~ are as follows: 1. ACT composite of ~~28~~ or greater. 2. A high school GPA of 3.75 or greater (weighted or un-weighted). 3. Completion of the UHP application ~~together with one letter of support from an individual who can attest to the student's motivation and ability to perform honors-level work~~.	***Admission requirements*** The general criteria for admission to the UHP are as follows: 1. ACT composite of 29 or greater. 2. A high school GPA of 3.75 or greater (weighted or un-weighted). 3. Completion of the UHP application through the Honors Administration Link: www.k-state.edu/ksuhonors/hal
Students who have notable extracurricular experience and/or leadership activities and who, for whatever reason, do not quite achieve the GPA and/or ACT ~~cutoffs~~ are still encouraged to apply. ~~Because of the high quality and number of applicants, meeting the above criteria does not necessarily guarantee admission.~~ All components of the application are used to reach a final decision.	Students who have notable extracurricular experience and/or leadership activities and who, for whatever reason, do not quite achieve the GPA and/or ACT scores are still encouraged to apply. All components of the application are used to reach a final decision.
Current students wishing to enter the ~~university honors program~~ should have a cumulative GPA of 3.5 or higher (K-State grades only) and are encouraged to visit with the staff about their specific situation.	Current students wishing to enter the UHP should have a cumulative GPA of 3.5 or higher (K-State grades only) and are encouraged to visit with the UHP staff about their specific situation.
Students transferring from other institutions who are interested in a possible honors curriculum are also encouraged to consult with the ~~University Honors Program~~ staff.	Students transferring from other institutions who are interested in a possible honors curriculum should have a 3.5 cumulative GPA in prior undergraduate

University Honors Program – Completion requirements ~~Minimum of 15 Credit Hours (minimum of 16 credit hours in the College of Arts and Sciences)~~

~~I. **University Level** - 7 credit hours required~~

~~A. RETREAT for new students prior to fall semester (optional)~~

~~B. XXX 020 Students enroll in program each semester - 0 credit~~
~~[XXX indicates that students will enroll by college, e.g., DAS 020]~~

~~C. XXX 189 Introduction to University Honors Program - 1 credit~~
~~[XXX indicates students will enroll by college. All 189 sections will have same content and format]~~

~~D. Other Requirements - 6 credits~~

~~University honors courses and new courses generated by departments. These courses can be honors sections of required courses or elective seminars (most are 3 credit hours).~~

~~Alternative opportunities (e.g., study abroad) to generate university level honor credit hours must be approved by both the Director of the University Honors Program and the college coordinator (or appropriate college representative). Students cannot use a given activity for both university and college level requirements. Under no circumstances will students be allowed to arrange for credit after the experience is completed.~~

~~II. **College Level** - Minimum of 8 credit hours or equivalent required (9 credit hours or equivalent required in the College of Arts and Sciences)~~

work and are also encouraged to consult with the UHP staff.

Because of the high quality and number of applicants, meeting the above criteria does not necessarily guarantee admission.

Students must maintain a 3.5 GPA to remain in good standing and to graduate from the UHP.

University Honors Program – Completion requirements

1. **Orientation:** *One (1) introductory course – 1 credit*

   UHP students will complete the following course:

   XXX 189 Introduction to University Honors Program
   [XXX indicates students will enroll by college. All 189 sections will have same content and format]

2. **Courses**: *Four (4) for-credit academic courses – 12 credits minimum*

   At least four UHP-eligible courses must be completed for credit for a minimum total of twelve credit hours. UHP students will have the flexibility to choose from a menu of three eligible options:

   - UHP-designated courses (e.g., Honors Chemistry, Honors Introduction to the Humanities) that carry course credit.
   - Contract courses (i.e., a regular for-credit course where the student and instructor agree upon additional scholarly expectations and outcomes).
   - Course credits taken for undergraduate research

3. **Experiences**: *Three (3) co-curricular experiences and/or additional for- credit academic courses – total credits will vary: no minimum*

~~Individual colleges will generate the courses and experiences that will be required of students in their college. These plans have been approved by the faculty in each college, the Director of the University Honors Program (working with the Honors Advisory Council), and Faculty Senate.~~

~~The program must include a capstone Honors Project for each student, an activity that would represent a significant body of work and supervised by a faculty member. Amount of credit hours or their equivalent varies across colleges.~~

~~The total credit hours and/or equivalent credit must add to a minimum of 8 hours (9 hours in Arts and Sciences).~~

~~In virtually all colleges, alternative opportunities (study abroad, internships, community service, etc.) can be used to fulfill this requirement, whether it is for academic credit or an equivalent. As noted above, these alternative opportunities must be approved by both the appropriate college representative and the University Honors Program Director and must be in place before the activity occurs.~~

For more information
www.k-state.edu/ksuhonors
E-mail: ksuhonors@k-state.edu

This requirement accommodates multiple forms of experiential learning, co-curricular enrichment, and/or additional UHP-eligible coursework. Eligible co-curricular experiences will include items such as study abroad, International Service Teams participation, undergraduate research, internships, participation on a university competition team, and work as a teaching assistant.

The UHP will develop and maintain guidelines for what constitutes a qualifying experience, including a menu of options. Other experiences may also be proposed, pending the approval of the relevant College coordinator and the UHP staff.

In brief, eligible experiences will require students to intentionally reference and integrate knowledge from their curriculum in an applied fashion and involve active accountability (supervision, mentorship, instruction, etc.). Thus, eligible co-curricular experiences are not intended to encompass routine participation or leadership in campus clubs or "student life" activities.

Students may also choose to complete additional UHP-eligible and for-credit academic courses in this category.

4. **Project**: *One (1) independent UHP scholarly project – 0-3 credits*

   Students can select one of four tracks to complete their UHP Project. Each track emphasizes integrative, independent learning and skill development.

   a. *Research track* | A traditional "honors thesis" where students complete research under the supervision of faculty members.

   b. *International track* | Project based upon study or service abroad for a minimum duration of ten weeks.

	c. *Professional track* | Project based upon a full-time internship or co-op experience for a minimum duration of ten weeks. Two distinct internships with a single employer may also be used as the basis for a project, provided they total at least ten weeks (with UHP approval granted before the second internship). d. *Creative track* | Project based upon the creation of original creative work, principally for students in the fine and performing arts for whom artistic production is an essential scholarly activity. All four tracks will require a significant intellectual product that is supervised and approved by a K-State mentor with appropriate expertise. All proposals and completed projects must also be approved by the mentor, the College coordinator and the UHP. Project approval must be obtained prior to beginning the proposed project. **Additional Notes** • Students may not "double dip" by counting any single course or activity in more than one UHP requirement category. • In both the "Experiences" and "Project" categories, experiences such as internships, if they are required parts of a student's declared major, may *only* satisfy a UHP requirement if an additional enrichment and/or intellectual product is agreed upon and verified. • Transfer students who completed Honors coursework at another institution will have the opportunity to petition the UHP Director to apply those credits towards the completion of UHP course requirements. • The completion of graduate-level coursework above and beyond the stated requirements

	of the student's declared major may be counted for UHP credit through the process of course contracting. **For more information** www.k-state.edu/ksuhonors E-mail: ksuhonors@k-state.edu

The proposal above refers to language that appears at the following catalog location:
http://catalog.k-state.edu/content.php?catoid=13&navoid=1411%20-%20univ_hono_prog#univ_hono_prog

Rationale: There are three primary goals that motivate the proposed revision of the curriculum:

1. To harmonize requirements across all the colleges. They currently vary among the colleges, which raises concerns in terms of complexity, recruiting impact and problems that arise when Honors students move from one College to another.

2. To provide attractive, readily legible requirements that will aid the university in recruiting top students. This includes adjusting the requirements towards greater parity with our competitors and other respected honors programs.

3. To enhance our ability to graduate students from the UHP. We also recognize that the UHP has a role to play in fostering a level of engagement that aids in the general retention of high-achieving students, and the proposed requirements seek to incentivize that engagement.

Impact: This proposal impacts the colleges of Agriculture; Architecture, Planning, and Design; Arts & Sciences; Business Administration; Education; Engineering; and Human Ecology since students from each of these colleges will have the option to participate.

College-level coordinators for each of these colleges have been notified, and have indicated their willingness to support the proposed changes.

It is hoped that the changes will have a positive impact in terms of helping to recruit and retain high-achieving students.

No specific impacts are anticipated in terms of cost. While college and department resources are certainly utilized to offer Honors courses, and while the time and energy of faculty are utilized to supervise Honors projects and Honors contracts, those same demands exist under the current system. Thus, we do not believe this proposal encumbers new commitments of money, space, or faculty time.

In addition, the flexible nature of the curriculum means that there are no mandatory costs associated with the adoption of the proposed curriculum for any unit; no unit has a specified obligation to offer an Honors course.
Effective Term: Fall 2016

Interdisciplinary Secondary Major in Global Food Systems Leadership

New Undergraduate Curriculum

Communications and Agricultural Education

Global Food Systems Leadership Secondary Major

ADD:

REQUIREMENTS FOR A SECONDARY MAJOR IN GLOBAL FOOD SYSTEMS LEADERSHIP

TOTAL = (24)

Core Courses (9)
All students must complete the following three courses.

GENAG/LEAD/DAS 225
Fundamentals of Global Food Systems Leadership (3)

GENAG/LEAD/DAS 325
Uncertainty in Global Food Systems Leadership (3)

GENAG/LEAD/DAS 425
Global Food Systems Leadership in Action (3)

Food and Agriculture Courses (6)
Students would select a minimum of 6 credits from this list:

AGEC 315- Contemporary Issues in Global Food and Ag Systems (3)
AGEC 710- Comparative Food & Ag Systems (3)
AGRON 220- Crop Science (4)
ASI 102- Principles of Animal Science (3)
ASI 350- Meat Science (3)
ASI 595- Contemporary Issues in Animal Science and Agriculture (3)
ENTOM 301- Insects and People (3)
FDSCI 302- Intro to Food Science (3)
GENAG 690- Seminar in International Agriculture (1)
GRSC 101- Intro to Grain Science (3)
HN 400- Human Nutrition (3)
HORT 201- Principles of Horticulture (4)
HORT 325- Intro to Organic Farming (2)

Areas of Concentration……(9)
All students must complete 9 credits from one of the following areas of concentration

Policy
HIST 533- Topics in the History of the Americas- Food in America (Var)
HN 600- Public Health Nutrition (3)
POLSC 333- World Politics (3)
POLSC 507- Introduction to Public Administration (3)
POLSC 541- Politics of the World Economy (3)
POLSC 647- International Law (3)
POLSC 651- International Organization (3)
AGEC 410- Agricultural Policy (3)
AGEC 610- Current Agriculture and National Resource Policy Issues (3)
SOCIO 363- Global Problems (3)
SOCIO 507- International Dev. & Social Change (3)
SOCIO 533- Rural Sociology (3)
SOCIO 536- Environmental Sociology (3)

Community Engagement

COMM 465- Communication and Conflict (3)
COMM 480- Intercultural Communication (3)
CNRES 531- Core Conflict Resolution (3)
CNRES 532- Conflict Resolution Across Cultures and Contexts (3)
CNRES 536- Conflict & Trauma in Intl Settings (3)
PLAN 415- World Cities (3)
PLAN 660- Community Development Planning (3)
PLAN 740- Small Community and Rural Area Planning (3)
SOCIO 633/ANTH 633- Gender, Power, and International Development (3)

Sustainability of Natural Resources

AGCOM 712- Environmental Communication (3)
AGRON 305- Soils (4)
AGRON 335- Environmental Quality (3)
AGRON 375- Soil Fertility (3)
ATM 558- Soil Erosion and Sediment Pollution Control (3)
ATM 661- Watershed Management (3)
BAE 560- Hydrology for Biological Systems (3)
BIOL 303- Ecology of Environmental Problems (3)
BIOL 529- Fundamentals of Ecology (3)
CHEM 315- Environmental Science: A Chemistry Perspective (3)
GEOG 221- Introduction to Physical Geography (4)
GEOG 340- Geography of Natural Resources (3)
GEOG 360- Sustainability Concepts and Issues (3)
GEOG 460- Human Dimensions of Global Change (3)
GEOG 760- Human Impact on the Environment (3)
HIST 511- Environmental History (3)
HIST 598- Topics in Non-Western History- Environmental History of Mexico (Var)
HORT 790- Sustainable Agriculture (2)
HORT 791- Urban Agriculture (2)
PMC 275- Intro to Natural Resource Management (3)

Economics and Entrepreneurship

AGEC 515- Food and Agribusiness Marketing (3)
AGEC 525- Natural Resources and Environmental Economics (3)
AGEC 570- Food Manufacturing, Distributing, and Retailing (3)
AGEC 615- Global Agricultural Development (3)
AGEC 623- International Agricultural Trade (3)
AGEC 632- Agribusiness Logistics (3)
ECON 681- International Economics (3)
ECON 682- Development Economics (3)
ENTRP 520- Social Entrepreneurship (3)
MKTG 544- International Marketing (3)
POLSC 541- Politics of the World Economy (3)
SOCIO 507- International Development and Social Change (3)

Food Production and Processing

ASI 310- Poultry and Poultry Product Evaluation (2)
ASI 361- Meat Animal Processing (2)
ASI 370- Principles of Meat Evaluation (2)
ASI 405- Fundamentals of Milk Processing (3)
ASI 495- Advanced Meat Evaluation (2)
ASI 608- Dairy Foods Processing & Technology (3)
ASI 610- Processed Meat Operations (2)
ASI 640- Poultry Products Technology (3)
ASI 671- Meat Selection and Utilization (2)
ASI 777- Meat Technology (3)
FDSCI 305- Fundamentals of Food Processing (3)
FDSCI 660- Intl Study Experience in Food Science (Var)
FDSCI 690- Principles of HACCP & HARPC (3)
GRSC 150- Principles of Milling (2)

GRSC 151- Principles of Milling Laboratory (1)
GRSC 405 - Grain Analysis Techniques (2)
GRSC 602 - Cereal Science (3)
GRSC 625 - Flour and Dough Testing (3)
GRSC 635 - Baking Science I (2)
GRSC 636 - Baking Science I Laboratory (2)
GRSC 637 - Baking Science II (3)
GRSC 638 - Baking Science II Laboratory (1)
HIST 557- History of American Agriculture (3)
HN 400- Human Nutrition (3)
HN 413- Science of Food (4)
HORT 520- Fruit Production (3)
HORT 560- Vegetable Crop Production (3)
HORT 725- Postharvest Physiology and Technology of Horticulture Crops (3)

RATIONALE: With a growing and aging world population, demand on food systems is changing and will require collaborative leadership to work with the complexity of the systems. Arable land is growing more limited. Water resources are scarce. The middle class around the world is growing and increasing the demand for high quality protein. Both obesity and hunger are major challenges, as is post-harvest food loss (40% in parts of the world).

In the developing world, problems associated with overstretched natural resources are exacerbated by political instability, developmental problems associated with poor nutrition, inadequate infrastructure, limited availability of foundational and continuing education, lack of access to micro-finance opportunities and legal challenges regarding private property rights among numerous other social challenges. In addition, women in these countries are responsible for 80 percent of the farming and receive 10 percent of the wealth.

In the developed world, increasing regulatory challenges and competing demands on resources fuel debates that frequently challenge the benefit and role of food production in society. Issues central to the global climate and food production debate such as GMO crops, sources and reduction of greenhouse gas, food vs. fuel, water usage and distribution, domestic vs. imported food, sustainability and externalities of food production, and others, are challenges with which tomorrow's leaders will continue to wrestle.

Addressing the "grand challenges" facing food production and society cannot happen within the tidy confines of traditional disciplines that are conventionally defined by academic majors. Rather, progress on such challenges will require an interdisciplinary and systems approach that considers a wide spectrum of stakeholder perspectives and expertise. These challenges will require leadership from corporate and nonprofit worlds, academia, and governments worldwide.

Equipping undergraduate students with the skills and experiences to explore these issues through a systems lens that may lead to frequent struggles with competing values and priorities will better prepare them for the world in which they will be asked to perform and lead as citizens and employees. To exercise leadership in global food systems, students will need to understand the food value chain and be able to skillfully intervene in the human systems that are present throughout the value chain. They will not only need to "tell the food story," they will need to be able to bring groups together who often have disparate exigencies and values. This program will develop the leadership capacity of students entering careers in

agriculture, business, nonprofits, academia, and government to make progress on these grand challenges.

According to data from the U.S. Department of Agriculture and the Coalition for a Sustainable Agricultural Workforce, there is significant demand in the agricultural/food workforce at the bachelor's, master's, and doctoral level. CASW calls on universities and others to pipeline more students. That demand is beyond the current number of students enrolled in agricultural studies.

A global food systems leadership program can draw more students to this area of growth within and outside of the College of Agriculture and can help increase agricultural/food and leadership literacy and capacity for all students enrolled. Further it not only aligns with the Presidential Initiative in Global Food Systems but also helps achieve its goals in talent development and academics. It is another way to contribute to the goals of K-State 2025.

IMPACT: All of the following departments have a possible impact as their courses are listed in the elective list. All units were contacted in November 2014 and report no objection. (See attached emails)

AGCOM, AGEC, AGRON, ASI, BAE/ATM, BIOL, CHEM, COMM, ECON, ENTM, ENTRP, FDSCI, FSHS, GEOG, GRSC, HIST, HN, HORT, MKTG, PLAN, PMC, POLSC, SOCIO

EFFECTIVE DATE: Fall 2016

New Degree Request – Kansas State University

Criteria	Program Summary
1. Program Identification	Secondary Major in Global Food Systems Leadership CIP 44.0201
2. Academic Unit	Communications and Agricultural Education, Staley School of Leadership Studies, and Political Science.
3. Program Description	The proposed secondary major in Global Food Systems Leadership recognizes addressing "grand challenges" facing food production and society cannot happen within the tidy confines of traditional disciplines that are conventionally defined by academic majors. Rather, progress on such challenges will require an interdisciplinary and systems approach that considers a wide spectrum of stakeholder perspectives and expertise. These challenges will require leadership from corporate and nonprofit worlds, academia, and governments worldwide. Equipping undergraduate students with the skills and experiences to explore these issues through a systems lens that may lead to frequent struggles with competing values and priorities will better prepare them for the world in which they will be asked to perform and lead as citizens and employees. To exercise leadership in global food systems, students will need to understand the food value chain and be able to skillfully intervene in the human systems that are present throughout the value chain. They will not only need to "tell the food story," they will need to be able to bring groups together who often have disparate exigencies and values. This program will develop the leadership capacity of students entering careers in agriculture, business, nonprofits, academia, and government to make progress on these grand challenges.
4. Demand/Need for the Program	According to data from the U.S. Department of Agriculture and the Coalition for a Sustainable Agricultural Workforce, there is significant demand in the agricultural/food workforce at the bachelor's, master's, and doctoral level. CASW calls on universities and others to pipeline more students. That demand is beyond the current number of students enrolled in agricultural studies. A global food systems leadership program can draw more students to this area of growth within and outside of the College of Agriculture and can help increase agricultural/food and leadership literacy and capacity for all students enrolled.

5. Comparative /Locational Advantage	There are no other programs or institutions with similar programs in the Kansas Regents system or beyond. Kansas State University has a Presidential Initiative in Global Food Systems. Combining the expertise of the College of Agriculture of global food systems with the civic leadership focus of the Staley School of Leadership Studies makes this program unique.
6. Curriculum	This interdisciplinary secondary major includes three core courses (9 credit hours), a food and agriculture elective area (6 credit hours), and 5 possible areas of concentration: policy, community engagement, sustainability of natural resources, economics and entrepreneurship, and food production and processing (9 credit hours). The core course are new and unique to this program. They were developed by the interdisciplinary team and will be co-taught by faculty in Communications and Agricultural Education and the Staley School of Leadership Studies. These courses will lay the foundation for and solidify learning in elective course work. The academic objectives of this program are to: • Convene diverse publics • Discern and apply frameworks of public engagement, democracy, deliberation, and dialogue • Critically evaluate key concepts and theories of deliberative democracy and public engagement • Design and implement community-engaged scholarship • Advance the interdisciplinary scholarship of public engagement • Enhance communication, leadership, and collaboration • Discern, analyze, and practice ethical dimensions of leadership and public engagement
7. Faculty Profile	The faculty teaching the core courses are from Communications and Agricultural Education and the Staley School of Leadership Studies. These faculty have terminal degrees and all but one are tenured or tenure-track. Many other faculty will teach through the elective courses from many other colleges and departments.

8. Student Profile	The students entering this program will represent a variety of academic backgrounds and sectors due to the interdisciplinary and applied nature of the program. The characteristics of students targeted for this program include: • Students in LEAD 212: Introduction to Leadership Concepts, AGCOM 110: Introduction to Agricultural Communications • Students who want to tie global service-learning experiences to food systems course content. • Students interested in being change agents for our world's growing population and the increasing need to provide accessible healthful food to all. • College of Agriculture students interested in bringing food systems solutions to communities through collaborative work. • Staley School of Leadership Studies students interested in global food systems as a context for exercising leadership. • Humanities students interested in the knowledge and language around agriculture. • Students entering careers in agriculture, business, nonprofits, academia, and government to make progress on these grand challenges.
9. Academic Support	No new academic support services are needed for the program.
10. Facilities and Equipment	No new facilities or equipment are needed for the program.
11. Program Review, Assessment, Accreditation	This program will be reviewed on an 8-year cycle by the Kansas Board of Regents. This program will be reviewed according to the timeline for Department of Communications and Agricultural Education program review. Additionally, the Interdisciplinary Advisory Board and Director will review the program continually to make assessments and adjustments as needed.
12. Costs, Financing	This program leverages the existing resources within Communications and Agricultural Education and the Staley School of Leadership Studies. Only 1 FTE instructor position is being requested to support teaching and outreach in the area of Global Food Systems. There will be internal reallocation changes to prepare for this program.

CURRICULUM OUTLINE
NEW DEGREE PROPOSALS
Kansas Board of Regents

I. Identify the new degree:
Secondary Major in Global Food Systems Leadership

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

Course Name & Number	Credit Hours
Core (9 credit hours)	
GENAG/LEAD/DAS 225- Fundamentals of Global Food Systems Leadership	**Credits:** (3)
GENAG/LEAD/DAS 325- Uncertainty in Global Food Systems Leadership	**Credits:** (3)
GENAG/LEAD/DAS 425- Global Food Systems Leadership in Action	**Credits:** (3)
Electives (15 credit hours)	
Food and Agriculture Courses…….(6)	
Students would select a minimum of 6 credits from this list:	
AGEC 315- Contemporary Issues in Global Food and Ag Systems	**Credits:** (3)
AGEC 710- Comparative Food & Ag Systems	**Credits:** (3)
AGRON 220- Crop Science	**Credits:** (4)
ASI 102- Principles of Animal Science	**Credits:** (3)
ASI 350- Meat Science	**Credits:** (3)
ASI 595- Contemporary Issues in Animal Science and Agriculture	**Credits:** (3)
ENTOM 301- Insects and People	**Credits:** (3)
FDSCI 302- Intro to Food Science	**Credits:** (3)
GENAG 690- Seminar in International Agriculture	**Credits:** (1)
GRSC 101- Intro to Grain Science	**Credits:** (3)
HN 400- Human Nutrition	**Credits:** (3)
HORT 201- Principles of Horticulture	**Credits:** (4)
HORT 325- Intro to Organic Farming	**Credits:** (2)
Areas of Concentration……(9)	
All students must complete 9 credits from one of the following areas of concentration	
Policy	
HIST 533- Topics in the History of the Americas- Food in America	**Credits:** (1-3)
HN 600- Public Health Nutrition	**Credits:** (3)
POLSC 333- World Politics	**Credits:** (3)
POLSC 507- Introduction to Public Administration	**Credits:** (3)
POLSC 541- Politics of the World Economy	**Credits:** (3)
POLSC 647- International Law	**Credits:** (3)
POLSC 651- International Organization	**Credits:** (3)
AGEC 410- Agricultural Policy	**Credits:** (3)
AGEC 610- Current Agriculture and National Resource Policy Issues	**Credits:** (3)
SOCIO 363- Global Problems	**Credits:** (3)
SOCIO 507- International Development and Social Change	**Credits:** (3)
SOCIO 533- Rural Sociology	**Credits:** (3)
SOCIO 536- Environmental Sociology	**Credits:** (3)

Community Engagement

COMM 465- Communication and Conflict	**Credits:** (3)
COMM 480- Intercultural Communication	**Credits:** (3)
FSHS 531- Core Conflict Resolution	**Credits:** (3)
FSHS 532- Conflict Resolution Across Cultures and Contexts	**Credits:** (3)
FSHS 536- Conflict and Trauma in International Settings	**Credits:** (3)
PLAN 415- World Cities	**Credits:** (3)
PLAN 660- Community Development Planning	**Credits:** (3)
PLAN 740- Small Community and Rural Area Planning	**Credits:** (3)
SOCIO 633/ANTH 633- Gender, Power, and International Development	**Credits:** (3)

Sustainability of Natural Resources

AGCOM 712- Environmental Communication	**Credits:** (3)
AGRON 305- Soils	**Credits:** (4)
AGRON 335- Environmental Quality	**Credits:** (3)
AGRON 375- Soil Fertility	**Credits:** (3)
ATM 558- Soil Erosion and Sediment Pollution Control	**Credits:** (3)
ATM 661- Watershed Management	**Credits:** (3)
BAE 560- Natural Resource Engineering I	**Credits:** (3)
BIOL 303- Ecology of Environmental Problems	**Credits:** (3)
BIOL 529- Fundamentals of Ecology	**Credits:** (3)
CHEM 315- Environmental Science: A Chemistry Perspective	**Credits:** (3)
GEOG 221- Introduction to Physical Geography	**Credits:** (4)
GEOG 340- Geography of Natural Resources	**Credits:** (3)
GEOG 360- Sustainability Concepts and Issues	**Credits:** (3)
GEOG 460- Human Dimensions of Global Change	**Credits:** (3)
GEOG 760- Human Impact on the Environment	**Credits:** (3)
HIST 511- Environmental History	**Credits:** (3)
HIST 598- Topics in Non-Western History- Environmental History of Mexico	**Credits:** (1-3)
HORT 790- Sustainable Agriculture	**Credits:** (2)
HORT 791- Urban Agriculture	**Credits:** (2)
PMC 375- Introduction to Natural Resource Management	**Credits:** (3)

Economics and Entrepreneurship

AGEC 515- Food and Agribusiness Marketing	**Credits:** (3)
AGEC 525- Natural Resources and Environmental Economics	**Credits:** (3)
AGEC 570- Food Manufacturing, Distributing, and Retailing	**Credits:** (3)
AGEC 615- Global Agricultural Development	**Credits:** (3)
AGEC 623- International Agricultural Trade	**Credits:** (3)
AGEC 632- Agribusiness Logistics	**Credits:** (3)
ECON 681- International Economics	**Credits:** (3)
ECON 682- Development Economics	**Credits:** (3)
ENTRP 520- Social Entrepreneurship	**Credits:** (3)
MKTG 544- International Marketing	**Credits:** (3)
POLSC 541- Politics of the World Economy	**Credits:** (3)
SOCIO 507- International Development and Social Change	**Credits:** (3)

Food Production and Processing

ASI 310- Poultry and Poultry Product Evaluation	**Credits:** (2)
ASI 361- Meat Animal Processing	**Credits:** (2)
ASI 370- Principles of Meat Evaluation	**Credits:** (2)
ASI 405- Fundamentals of Milk Processing	**Credits:** (3)

ASI 495- Advanced Meat Evaluation	**Credits:** (2)
ASI 608- Dairy Foods Processing & Technology	**Credits:** (3)
ASI 610- Processed Meat Operations	**Credits:** (2)
ASI 640- Poultry Products Technology	**Credits:** (3)
ASI 671- Meat Selection and Utilization	**Credits:** (2)
ASI 777- Meat Technology	**Credits:** (3)
FDSCI 305- Fundamentals of Food Processing	**Credits:** (3)
FDSCI 660- International Study Experience in Food Science	**Credits:** (0-6)
FDSCI 690- Principles of HACCP	**Credits:** (2)
GRSC 150- Principles of Milling	**Credits:** (2)
GRSC 151- Principles of Milling Laboratory	**Credits:** (1)
GRSC 405 - Grain Analysis Techniques	**Credits:** (2)
GRSC 602 - Cereal Science	**Credits:** (3)
GRSC 625 - Flour and Dough Testing	**Credits:** (3)
GRSC 635 - Baking Science I	**Credits:** (2)
GRSC 636 - Baking Science I Laboratory	**Credits:** (2)
GRSC 637 - Baking Science II	**Credits:** (3)
GRSC 638 - Baking Science II Laboratory	**Credits:** (1)
HIST 557- History of American Agriculture	**Credits:** (3)
HN 400- Human Nutrition	**Credits:** (3)
HN 413- Science of Food	**Credits:** (4)
HORT 520- Fruit Production	**Credits:** (3)
HORT 560- Vegetable Crop Production	**Credits:** (3)
HORT 725- Postharvest Physiology and Technology of Horticulture Crops	**Credits:** (3)

IMPLEMENTATION YEAR FY 2017

Fiscal Summary for Proposed Academic Programs

Institution: Kansas State University Proposed Program: Secondary Major in Global Food Systems Leadership

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		80 (includes 20 students from each previous year and 40 from year 3)	
B. Total SCH taken by all students in program	120 (Avg. 6 hrs per year for this program)		240		480	

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. In subsequent years, please include only the additional amount budgeted.

	Implementation Year	Year 2	Year 3
Base Budget Salaries	$79,200	0	0
OOE	0	0	0
Total	$79,200	0	0

Indicate source and amount of funds if other than internal reallocation: This program will leverage the resources that already exist in Communications and Agricultural Education and the Staley School of Leadership Studies and curriculum within multiple colleges. Although minimum teaching resources exist for this program one additional instructor position in Communications and Agriculture Education is being requested to specialize in Global Food Systems teaching and outreach. This is the salary listed above ($79,200 includes salary and benefits). It is being requested through the College of Agriculture Dean's Office.

Revised: September, 2003

Approved: _____

NEW PROGRAM PROPOSAL

Basic Program Information

(1) Proposing institution; Kansas State University
(2) Title of proposed program; Global Food Systems Leadership
(3) Degree(s) to be offered; Secondary Major
(4) Anticipated date of implementation; Fall 2016
(5) Responsible department(s) or unit(s); Communications and Agricultural Education, Staley School of Leadership Studies, and Political Science
(6) Center for Education Statistics (CIP) code associated with the program; 30.2001

Program Proposal Narrative

Program Justification

Is the program central to the mission of the institution? What are the locational and comparative advantages of the program?

Kansas State University has a Presidential Initiative in Global Food Systems. The university is positioned to make progress in this area through research and graduate initiatives. The addition of this secondary major in Global Food Systems Leadership will equip undergraduate students with the skills and experiences to explore these issues through a systems lens that may lead to frequent struggles with competing values and priorities will better prepare them for the world in which they will be asked to perform and lead as citizens and employees.

Addressing the "grand challenges" facing food production and society cannot happen within the tidy confines of traditional disciplines that are conventionally defined by academic majors. Rather, progress on such challenges will require an interdisciplinary and systems approach that considers a wide spectrum of stakeholder perspectives and expertise. These challenges will require leadership from corporate and nonprofit worlds, academia, and governments worldwide.

Combining the expert knowledge of global food systems through Communications and Agriculture Education and other departments in the College of Education with the civic leadership focus of the Staley School of Leadership Studies is what makes this program unique. No other university in the Kansas Regents offers a similar program. Leveraging these resources will support the Global Food Systems initiative at Kansas State University and contribute to our state and our world.

What is the student demand for the program and what are the characteristics of the students who will participate in the program?

The projected enrollment for this program is 20 students each year for the first two years and 40 students for year three.

- Students in LEAD 212: Introduction to Leadership Concepts, AGCOM 110: Introduction to Agricultural Communications
- Students who want to tie global service-learning experiences to food systems course content.

- Students interested in being change agents for our world's growing population and the increasing need to provide accessible healthful food to all.
- College of Agriculture students interested in bringing food systems solutions to communities through collaborative work.
- Staley School of Leadership Studies students interested in global food systems as a context for exercising leadership.
- Humanities students interested in the knowledge and language around agriculture.
- Students entering careers in agriculture, business, nonprofits, academia, and government to make progress on these grand challenges.

What is the demand for graduates of the program?
According to data from the U.S. Department of Agriculture and the Coalition for a Sustainable Agricultural Workforce, there is significant demand in the agricultural/food workforce at the bachelor's, master's, and doctoral level. CASW calls on universities and others to pipeline more students. That demand is beyond the current number of students enrolled in agricultural studies.

A global food systems leadership program can draw more students to this area of growth within and outside of the College of Agriculture and can help increase agricultural/food and leadership literacy and capacity for all students enrolled.

Curriculum of the Proposed Program
Describe the more important academic objectives of the proposed program, including the range of skills and knowledge future graduates will possess.
The academic objectives of this program are to:

- Convene diverse publics
- Discern and apply frameworks of public engagement, democracy, deliberation, and dialogue
- Critically evaluate key concepts and theories of deliberative democracy and public engagement
- Design and implement community-engaged scholarship
- Advance the interdisciplinary scholarship of public engagement
- Enhance communication, leadership, and collaboration
- Discern, analyze, and practice ethical dimensions of leadership and public engagement

The course work required of all students who major in this program shall be described.
This interdisciplinary secondary major includes three core courses (9 credit hours) and elective courses in specific areas (15 credit hours). The core course are new and unique to this program. They were developed by the interdisciplinary team and will be co-taught by faculty in Communications and Agricultural Education and the Staley School of Leadership Studies. These courses will lay the foundation for and solidify learning in elective course work. The core courses include:

- GENAG/LEAD/DAS 225: Fundamentals of Global Food Systems Leadership
- GENAG/LEAD/DAS 225: Uncertainty in Global Food Systems Leadership
- GENAG/LEAD/DAS 225: Global Food Systems Leadership in Action

Students will also complete 6 credit hours of electives in food and agriculture. For students not in the College of Agriculture, this allows them to take foundation food and agriculture courses beyond their major. For students in the College of Agriculture, this allows them to explore areas beyond their major.

Additionally, students will take 9 credit hours in an area of concentration. This will allow them to have a focus area within global food systems leadership. Those areas of concentration are:

- Policy
- Community Engagement
- Sustainability of Natural Resources
- Economics and Entrepreneurship
- Food Production and Processing

Internships and practica required of students in this program shall be described.
No internships or practica required

If clinical are required, are sufficient sites available?
No clinical required

Program Faculty

Faculty Qualifications
Courses will rotate between faculty members in the departments. For example, a faculty member who is teaching in the program might have a 40% assignment for instruction one year. They may then have a 5% assignment in the following year if they only serve on the Interdisciplinary Advisory Board.

CORE FACULTY				
NAME	TITLE	HIGHEST DEGREE	TENURE STATUS	INSTRUCTIONAL EXPECTATION & ACADEMIC SPECIALIZATION
Kris Boone	Professor, Department Head	Ph.D.	Tenured	Instructional Expectation: GENAG 225, 325, 425 as needed Specialization: Agricultural Communications
Mary Kay Siefers	Senior Associate Director	Ph.D.	Non-Tenure-Track	Instructional Expectation: LEAD 325 Specialization: Adaptive Leadership, Social Justice
Brandon Kliewer	Assistant Professor	Ph.D.	Tenure-Track	Instructional Expectation: LEAD 425 Specialization: Civic Leadership, Public Engagement
Kerry Priest	Assistant Professor	Ph.D.	Tenure-Track	Instructional Expectation: LEAD 225

				Specialization: Leadership Education, Leader Identity Development

SUPPORTING FACULTY				
NAME	TITLE	HIGHEST DEGREE	TENURE STATUS	INSTRUCTIONAL EXPECTATION & ACADEMIC SPECIALIZATION
Shannon Washburn	Assistant Professor	Ph.D.	Tenured	Instructional Expectation: Undetermined Specialization: Agricultural Education
Lauri Baker	Associate Professor	Ph.D.	Tenured	Instructional Expectation: AGCOM 325, AGCOM 425 Specialization: New-Media Marketing Research
Jason Ellis	Associate Professor	Ph.D.	Tenured	Instructional Expectation: AGCOM 225 Specialization: Risk Crisis and Scientific Communication

No new faculty will be identified or employed by this intuition for this program.

How many graduate assistants will serve the program?
No graduate assistants will serve the program.

Academic Support
What are the academic support services for this program?
Advising services will be provided by director of the program with the governance of the Interdisciplinary Advisory Committee. The library, audio-visual, and academic computing resources already exist within the three departments to support the volume and quality of the program.

What new library materials and other forms of academic support are required beyond normal additions?
The academic support and library resources are sufficient in supporting this program. No additional support or acquisitions are needed.

What new supporting staff will be required beyond normal additions?
To adequately support the program in this structure, this interdisciplinary program leverages existing resources from three departments.

New Resources

- 1 FTE Instructor for teaching and outreach in Global Food Systems

Resources Reallocated Internally

- 20% of Department Head of Communications and Agricultural Education's time to serve as director the secondary major (reassigned within Communications and Agricultural Education)
- 0.25 FTE Administrative Officer (manage prospective student visits, facilitate application system, communicate with students, defense scheduling, etc.) (reassigned within Communications and Agricultural Education)

(5) Facilities and Equipment

What are the anticipated facilities requirements (existing, renovated or new)?
There are no anticipated facilities needs.

What new equipment will be required beyond normal additions?
There are no equipment needs for this program.

Program Review, Assessment and Accreditation

What program review process or evaluation methods will be used to review the program?
This program will be reviewed on an 8-year cycle by the Kansas Board of Regents. This program will be reviewed according to the timeline for Department of Communications and Agricultural Education program review. Additionally, the Interdisciplinary Advisory Board and Director will review the program continually to make assessments and adjustments as needed.

What student learning outcomes measures will be used to assess the program's effectiveness?
See Attachment for the Assessment of Student Learning Plan

What are the institution's plans regarding program accreditation?
There is no professional organization for accreditation.

Attachment A
Assessment of Student Learning Plan

A. College, Department, and Date

College: Agriculture, Education, Arts and Sciences
Department: Communications and Agricultural Education, Staley School of Leadership Studies, and Political Science
Date: August 1, 2015

B. Contact Person(s) for the Assessment Plan

Kris Boone, Ph.D., Communications and Agricultural Education

C. Name of Proposed Degree Program or Certificate

Secondary Major in Global Food Systems Leadership

D. Assessment of Student Learning Three-Year Plan

1. Student Learning Outcome(s)

Global

- Recognize the role that international politics and economies play in food security and distribution.
- Examine the relationships between private and public power structures and concerns such as wealth, landownership, environmental protection, sustainability, transportation, and trade.

Food Systems

- Identify the interaction among key components that comprise agricultural and food systems across disciplines.
- Analyze the intersection of production, processing, distribution, marketing, nutrition, natural resources.

Systems Thinking

- Evaluate the global food system by examining the linkages and components of which the system is comprised.
- Collaborate across disciplines to identify, develop, and implement interventions to address challenges.

Leadership

- Describe the impact of cultural identity, life experiences, and world views on leadership relationships with an emphasis on power, privilege, and inclusion.
- Employ the process of facilitating change in self, others, and systems.

All of these outcomes will be assessed as part of the three-year plan and for each review cycle.

2. Assessment Strategies

How will each of the learning outcomes be assessed?

SLO/Required Courses/experiences	Course Number(s)	Course Number(s)	Course Number(s)	Capstone Project/ Professional Growth Plan
Degree program SLOs	225	325	425	
Recognize the role that international politics and economies play in food security and distribution.	x		x	A
Examine the relationships between private and public power structures and concerns such as wealth, landownership, environmental protection, sustainability, transportation, and trade.	x	x	x	A
Identify the interaction among key components that comprise agricultural and food systems across disciplines.	x		x	A
Analyze the intersection of production, processing, distribution, marketing, nutrition, natural resources.	x		x	A
Evaluate the global food system by examining the linkages and components of which the system is comprised.	x	x	x	A
Collaborate across disciplines to identify, develop, and implement interventions to address challenges.	x		x	A

Describe the impact of cultural identity, life experiences, and world views on leadership relationships with an emphasis on power, privilege, and inclusion.		x		A
Employ the process of facilitating change in self, others, and systems.		x	x	A
University SLOs (Graduate Programs)				
Knowledge	x	x	x	A
Skills	x	x	x	A
Attitudes and Professional Conduct	x	x	x	A

Faculty members will employ assessment strategies in each course and will make adjustments base on that information. The overall program will be assessed through the capstone project and graduating senior surveys. The program data will go to the Interdisciplinary Advisory Board and Director to compile into an assessment report. This reporting will be used to make decisions about courses and program opportunities offered.

Self Evaluation (indirect measure)

As you are graduating, please indicate how competent you feel in the following areas, which are related to your secondary major in Global Food Systems Leadership, by circling the appropriate number (1=Very Weak; 6= Very Strong). Also please indicate how your competency in these areas has grown during your time here (1=None; 6=Significant Growth).

Current Competency Very weak Very Strong	**My ability to…**	**Growth in Competency while in Program** None Sig. Growth
1 2 3 4 5 6	Recognize the role that international politics and economies play in food security and distribution.	1 2 3 4 5 6
1 2 3 4 5 6	Examine the relationships between private and public power structures and concerns such as wealth, landownership, environmental protection, sustainability, transportation, and trade.	1 2 3 4 5 6
1 2 3 4 5 6	Identify the interaction among key components that comprise agricultural and food systems across disciplines	1 2 3 4 5 6
1 2 3 4 5 6	Analyze the intersection of production, processing, distribution, marketing, nutrition, natural resources.	1 2 3 4 5 6
1 2 3 4 5 6	Evaluate the global food system by examining the linkages and components of which the system is comprised.	1 2 3 4 5 6
1 2 3 4 5 6	Collaborate across disciplines to identify, develop, and implement interventions to address challenges.	1 2 3 4 5 6
1 2 3 4 5 6	Describe the impact of cultural identity, life experiences, and world views on leadership relationships with an emphasis on power, privilege, and inclusion.	1 2 3 4 5 6
1 2 3 4 5 6	Employ the process of facilitating change in self, others, and systems.	1 2 3 4 5 6

Rubric to Assess Capstone Project and Professional Growth Plan (direct measure)

Learning Outcome	**Not Demonstrated = 0**	**Partially Demonstrated = 1**	**Demonstrated = 2**	**Mastered = 3**	**Score**
Recognize the role that international politics and economies play in food security and distribution	Dose not describe influence of politics and economies on food security and distribution	Articulates influence at basic level	Clearly articulates the influence	Articulates the interrelationships among variables	
Examine the relationships between private and public power structures and concerns such as wealth, landownership, environmental protection, sustainability, transportation, and trade.	Does not describe the relationships of power structures and concerns	Articulates relationships of power structures and concerns at a basic level	Clearly articulates the relationships of power structures and concerns	Articulates the interrelationships among variables	
Identify the interaction among key components that comprise agricultural and food systems across disciplines	Does not identify the interaction among key components	Identifies key components	Identifies key components and basic interactions	Fully describes interactions among key components, which are clearly identified	
Analyze the intersection of production, processing, distribution, marketing, nutrition, natural resources.	Does not describe the intersection	Describes the intersection but analysis is limited	Describes and analyzes the intersection	Provides insight into the intersection through analysis	
Evaluate the global food system by examining the linkages and components of which the system is comprised.	Linkages and/or components are not identified	Linkages and components are identified but not evaluated	Linkages and components are evaluated	Linkages and components are evaluated and extended logically	
Collaborate across disciplines to identify, develop, and implement interventions to address challenges.	Does not integrate interdisciplinary	Works to integrate interdisciplinary skills and	Successfully integrates interdisciplinary	Serves as model for others for integrating	

	skills and knowledge	knowledge with some success	skills and knowledge	interdisciplinary skills and knowledge	
Describe the impact of cultural identity, life experiences, and world views on leadership relationships with an emphasis on power, privilege, and inclusion.	Does not identify impact of variables on leadership relationships	Identifies impact of variables on leadership relationships but does not connect to power, privilege, and inclusion	Describes impact of variables on leadership relationships and connection to power, privilege, and inclusion	Evaluates the impact of variables on leadership relationships and connection to power, privilege, and inclusion	
Employ the process of facilitating change in self, others, and systems.	Does not use process of facilitating change	Describes process of facilitating change and may employ it with some groups	Employs the process of facilitating change in self, others, and systems	Employs the process in self, others, and systems and reflects on upon the activity to learn from it	

Secondary Major in Global Food Systems Leadership
Agreement of Support

The secondary major in Global Food Systems Leadership is an interdisciplinary undergraduate program being proposed by Communications and Agricultural Education, the Staley School of Leadership Studies, and Political Science which are in the College of Agriculture, College of Education/Office of the Provost, and College of Arts and Sciences respectively.

The agreement of support is required as part of the interdisciplinary undergraduate approval process. This document outlines the intention to commit resources to support the implementation of this proposal if it were to be approved.

The intention of this program is to build upon existing resources and courses offered across the university. Only three new courses are proposed for students in this program, each to be taught a minimum once per year. Those courses include:

- GENAG/LEAD/DAS 225: Fundamentals of Global Food Systems Leadership
- GENAG/LEAD/DAS 325: Uncertainty in Global Food Systems Leadership
- GENAG/LEAD/DAS 425: Global Food Systems Leadership in Action

The program will be administered similarly to the Genetics model where the program home will follow the program director. An Interdisciplinary Advisory Committee will be formed to provide governance of the program. The minimum of 5 members will be filled by representatives from the three proposing departments, but it is anticipated that teaching faculty of elective courses in the program might also serve on the committee. This committee will meet at least two times a year or when requested by the Program Director. The Program Director in collaboration with the Interdisciplinary Advisory Committee is responsible for admissions requirements, course and curriculum changes, student learning outcomes, and program review.

Communications and Agricultural Education will:

1. Serve as the first home for the secondary major
2. Work with the College of Agriculture to list GENAG 225, 325, and 425 as needed
3. Assign a co-instructor to GENAG 225, 325, and 425 (minimum once per year)
4. Have one-two members serving on the Interdisciplinary Advisory Committee

The Staley School of Leadership Studies will:

1. List LEAD 225, 325, 425 as needed
2. Assign a co-instructor to LEAD 225, 325, 425 (minimum once per year)
3. Provide classroom space in the Leadership Studies Building the three core courses
4. Have one-two members serving on the Interdisciplinary Advisory Committee

Political Science will:

1. Work with the College of Arts and Sciences to list DAS 225, 325, and 425 as needed (this does not include a responsibility to teach these courses unless interest is expressed)
2. Have one member serving on the Interdisciplinary Advisory Committee

College of Education – Master of Arts in Teaching (Grad Council approved 11-3-15)

Non-Expedited
Graduate New Program
Curriculum and Instruction

Master of Arts in Teaching

The Master of Arts in Teaching is designed to prepare talented and ambitious career changers to be knowledgeable, ethical, caring, decision makers.

Requirements for Admission to Program
Bachelor's degree from an accredited college or university and have an undergraduate GPA of 3.0 or higher in the last 60 hours of coursework or a cumulative GPA of 3.0 or higher; demonstrate basic academic competence by 1) A combined GRE score of 301 or higher on Verbal and Quantitative (1,000 combined verbal/quantitative, prior to August 2011), or 2) subtests scores of 150 on Mathematics, 156 on Reading, and 162 on Writing on Educational Testing Services' (ETS) Praxis Core Academic Skills for Educators.

In addition, students must receive a mean average of 3.0 on ETS's Personal Potential Index.

Required Courses (31 hours)
EDCI 702 Curriculum, Instruction, and Assessment (3 hours)
EDCI 710 Social Foundations of K-12 Education (3 hours)
EDCI 716 Teaching Diverse Learners (3 hours)
EDCI 760 Action Research in Education (3 hours)
EDCI 791 Teaching Science and Mathematics in the Elementary School (4 hours)
EDCI 792 Teaching Social Studies, Reading, and Literacy in the Elementary School (4 hours)
EDCI 793 Teaching Health, Movement, and Fine Arts (4 hours)
EDCI 800 Teaching Practicum (2 hours)
EDCI 801 Internship in K-12 Schools (4 hours)
EDCI 890 Master's Project (1 hour)

IMPACT: No foreseeable impact.

RATIONALE: The Department of Curriculum and Instruction currently offers of a Master of Science degree designed for in-service teachers. This is a proposal to add a new Master of Arts degree designed for pre-service teachers. The proposal is under simultaneous review by the KBOR.

The quality of the classroom teacher is the most predictive school-related variable of student academic achievement. This assertion is supported by decades of education research, and by the policies and expenditures of local, state, and national governments.[1] In short, the ways in which teachers are educated, developed, and mentored matters.

High quality teachers are important at every level of education but especially in the elementary school, where children build foundational ideas, skills, and attitudes that persist into future schooling and adult life.

The United States Department of Labor lists "elementary school teachers" among the "occupations with the most job growth" and projects that elementary teaching jobs will increase 168,000 (12.3%) by 2022.[2] A

1 Rice, Jennifer King. *Teacher Quality: Understanding the Effectiveness of Teacher Attributes*. Washington, DC: Economic Policy Institute, 2003.
2 http://www.bls.gov/emp/ep_table_104.htm.

growing number of Americans are turning to teaching as a second or even third durable career.[3] People's interests change over time and many recognize the importance of teaching as they gain additional life experience.

Yet, traditional pathways to elementary teaching present a host of practical obstacles—financial, educational, and geographic. The proposed Master of Arts in Teaching (M.A.T.) would open a new pathway to elementary teaching for those who have earned a Bachelor's degree and meet other admission criteria. This pathway would enable qualified Kansans and citizens of other states to earn a M.A.T. and recommendation for Kansas initial teacher (K-6) in 12 months through a rigorous curriculum delivered by online coursework and field experiences arranged in accredited elementary schools convenient to students in the program.

EFFECTIVE DATE: Spring 2016

3 New York Times. http://www.nytimes.com/2011/09/16/business/retirementspecial/pursuing-teaching-as-a-second-or-third-career.html?pagewanted=all&_r=0

BOARD OF REGENTS
NEW PROGRAM PROPOSAL CHECKLIST

For more detailed information, view the BOR Policy Manual and their Academic Affairs page:
http://www.kansasregents.org/policies_procedures
http://www.kansasregents.org/new_program_approval

Program Proposal Contents:

__√__ Proposing institution

__√__ Title of proposed program

__√__ Degree(s) to be offered

__√__ Anticipated date of implementation

__√__ Responsible department(s) or unit(s)

__√__ CIP Code (contact Office of Planning and Analysis)

Additional items to include:

__√__ Electronic program summary form

__√__ Electronic fiscal summary form

__√__ Electronic curriculum form

__√__ Electronic Faculty CVs or link to website

__√__ Signature sheet (www.ksu.edu/registrar/ccap)

Narrative (document should be in electronic format)

Program need and student characteristics

1. Centrality to mission

__√__ Mission Statement

__√__ Statement of aspiration

2. Student demand

__√__ Volume of student demand—disciplined survey analysis

N/A Bachelor's: 50 students after 3 years

__√__ Master's 20 students after 3 years

N/A Ph.D. 5 students after 3 years

3. Demand for graduates

__√__ Specific job opportunities or post-collegiate experiences

4. Locational and comparative advantages

__√__ Comparison to similar program in the Regents system and same institution

__√__ Comparison with similar regional programs

__√__ Demonstration of reason for being at this institution

__√__ Demonstration of the advantages & disadvantages of program being a freestanding, cooperative, or joint program including collaborative degree options

__√__ Location of program in institution's list of priorities

__√__ How priority determination has been made

__√__ Importance of establishing this program vis-à-vis other program alternatives

5. Student characteristics

__√__ Characteristics of pool from which students will be selected

__√__ Specific procedures and criteria for admission

__√__ Specific opportunities for student interaction

Curriculum

1. What is the curriculum

__√__ Description of the more important academic objectives

__√__ Range of skills future graduates will possess

__√__ Knowledge future graduates will possess

__√__ Required internships and practica

Program faculty

1. Quality

_____ Bachelor's: 3 Ph.D.

__√__ Master's: 3 additional Ph.D.

_____ Specialist/Ph.D.: 2 additional

__√__ Differentiation of core faculty and others

__√__ Appropriate academic specializations

__√__ Teaching requirements outside the program assigned to core faculty

__√__ Proportion of assignments devoted to the proposed program

__√__ Number, qualifications, and rank of faculty

__√__ CVs or link to website with these

2. Graduate assistants

N/A Identification of necessary graduate positions

N/A Budgeted salaries for Gas

Academic support

1. Academic support services

__√__ Advising

__√__ Library

__√__ Audio-visual

__√__ Academic computing

2. New academic support necessary

N/A Number of library acquisitions

__√__ New or enhanced academic support

3. New supporting staff

__√__ Staff requirements

__√__ Budgeted salaries

Facilities and equipment

1. Anticipated facilities requirement (existing, renovated or new)

__√__ Sufficient space

N/A Fiscal note for renovated or new facilities, with necessary work and additional costs

N/A Sources of funding for renovation and new construction

2. New equipment

__√__ Sufficient equipment

__√__ Itemization of available inventory

__√__ Equipment condition

__√__ Equipment life span

__√__ Itemization of new equipment needs

Program review, assessment and accreditation

__√__ Program review process or methods used

__√__ Student learning outcomes measures

__√__ Specialized accrediting agency

__√__ Institutional plans to have the program accredited

__√__ Timelines for accreditation

__√__ Projected costs, achieving and maintaining accreditation

New Degree Request – Kansas State University

Criteria	Program Summary
1. Program Identification	Master of Arts in Teaching (with recommendaton for K-6 teaching licensure)
2. Academic Unit	Kansas State University's (KSU) College of Education (COE) in Curriculum and Instruction
3. Program Description	The Master of Arts in Teaching program is designed for second-career adults who have previously attained a Bachelor's degree and would like to become elementary teachers. Program completers would earn a Master of Arts in Teaching degree and a recommendation for initial K-6 elementary teacher licensure simultaneaously. The program is designed as a cohort model and will be delivered exclusively online. The program provides an alternative pathway to teaching that is not currently avaialable to Kansans or others who live outside a reasonable radius of a university or other teacher education unit.
4. Demand/Need for the Program	According to the United States Department of Labor, demand for elementary teachers will increase by 12.3% in the next decade (as compared to 5.5% for secondary teachers). Many prospective, second career teachers lack convenient access to a university campus (e.g., western Kansas) to receive professional education.
5. Comparative /Locational Advantage	KSU's COE is a leading teacher education institution (2010 winner of the Association of Teacher Educators (ATE) – Distinguished Elementary Education Program in Teacher Education Award) and a leader in providing high-quality distance education (2014 winner of the Association for Continuing Higher Education's (ACHE) 2014 Distinguished Program: Credit Award for Academic Advising). In addition, the COE's Office of Field Experience has successfully piloted the technologies required for distance field experience placement and supervision. Most innovative pathways to teaching focus on secondary teachers and/or teaching in urban areas.
6. Curriculum	Students will complete 31 hours of graduate coursework that focuses on building a framework of knowledge, skills, and dispositions that will enable to students to make informed, independent, and caring judgments and skilfully act on them before, during, and after teaching.
7. Faculty Profile	All courses will be taught by members of the graduate faculty.
8. Student Profile	All students must satisfy Kansas State University's graduate school admission (i.e., Bachelor's degree from an accredited college or university and have an undergraduate GPA of 3.0 or higher in the last 60 hours of coursework or a cumulative GPA of 3.0 or higher). In addition, all students are required to demonstrate basic academic competence by 1) A GRE score of 301 or higher on Verbal and Quantative; or 2) subtests scores of 150 on Mathematics, 156 on Reading, and 162 on Writing on Educational Testing Services' (ETS) Praxis Core Academic Skills for Educators. In addition, students must earn a "pass" from the M.A.T. Admissions Committee based on their responses to COE admissions questions and criteria.
9. Academic Support	Upon admission to the program, students are assigned an academic advisor

	who is a graduate faculty member at Kansas State University. The advisior will assist in all aspects of academic advising and supervise completion of program portfolio.
10. Facilities and Equipment	The program will be delivered exclusively online. KSU will not need to purchase additional equipment to implement the program. Courses will be delivered using KSU's existing learning management system, Canvas. Students will be required to purchase a tablet, Swivel, and associated software to complete their field experiences ($750.00). The costs associated with this equipment will be offset by the use of eletronic textbooks in several classes and the continued use of these technolgies after degree completion.
11. Program Review, Assessment, Accreditation	The program will be subject to continuous review by graduate faculty in the Department of Curriculum and Instruction. Faculty will be invited to raise issues and help solve problems at monthly departmental and graduate faculty meetings. The program will also be subject to accreditation review by the Kansas State Department of Education and the National Council for Accreditation of Teacher Education, or NCATE.
12. Costs, Financing	• Based on an initial cohort of 25 students, the program will generate a total of $399,852.50 in tuition and fees. • KSU's Global Campus (GC) funded course conceptualization and development for the program—EDCI 702, 710, 711, 791, 792, and 793 ($67,000.00). • Faculty loads will be modestly impacted by the M.A.T. Most courses are provided in the May intersession, summer, or January intersession or are field experiences that will not count toward regular faculty load. • For the three courses (EDCI 791, EDCI 792, and EDCI 760) delivered during the regular academic year that may impact faculty load, the deaprtment chair and Dean have agreed to adjust faculty loads accordingly. To further reduce financial risk, faculty in those classes have agreed to teach the classes on a per student basis (i.e., not as a part of their regular load) if the classes fail to reach 15 students. • Students will be required to purchase a device (e.g., tablet) and associated technology to assist in distance field supervision (approximately $750.00 per student). However, several of the classes plan to design alternative textbooks to offset the costs of technology. • In the implementation year, KSU's College of Education will fund the salaries of additional personnel to assist with advising as well as placing and supervising field experiences. • The Dean of the College of Education has committed an additonal $20,000.00 to address additional start-up costs associated with marketing, software, hardware, and unanticipated expenses.

CURRICULUM OUTLINE
NEW DEGREE PROPOSALS
Kansas Board of Regents

I. Identify the new degree:

Master of Arts in Teaching (with recommendation for K-6 certification)

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

	Course Name & Number	Credits
Core Courses	EDCI 710 Social Foundations of Education*	3
	EDCI 702 Curriculum, Instruction, and Assessment**	3
	EDCI 716 Teaching Diverse Learners*	3
	EDCI 791 Teaching Science and Mathematics in the Elementary School*	4
	EDCI 792 Teaching Social Studies, Reading, and Literacy in the Elementary School*	4
	EDCI 793 Teaching Health, Movement, and Fine Arts in the Elementary School*	3
Electives	No Electives	
Research	EDCI 760 Action Research in Education***	3
	EDCI 890 Master's Project**	1
Practica	EDCI 800 Teaching Practicum*	2
	EDCI 801 Internship in K-12 Schools*	4
		31 **Total**

Scope and Sequence

Semester	Courses	Hours
Intersession	EDCI 710 Social Foundations of Education*	3
Summer	EDCI 702 Curriculum, Instruction, and Assessment** EDCI 716 Teaching Diverse Learners*	3 3
Fall	EDCI 791 Teaching Science and Mathematics in the Elementary School* EDCI 792 Teaching Social Studies, Reading, and Literacy in the Elementary School* EDCI 800 Teaching Practicum*	4 4 2
Intersession	EDCI 793 Teaching Health, Movement, and Fine Arts in the Elementary School*	4
Spring	EDCI 801 Internship in K-12 Schools* EDCI 760 Action Research in Education*** EDCI 890 Master's Project**	4 3 1
TOTAL		31

* denotes a new course
** denotes an existing class that needs to be converted to online delivery
*** denotes an existing online class

IMPLEMENTATION YEAR FY 2016

Fiscal Summary for Proposed Academic Programs

Institution: Kansas State University **Proposed Program**: Master of Arts in Teaching (with Elementary Certification)

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:	25		50		75	
B. Total SCH taken by all students in program	750 hours		1500 hours		2250 hours	
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. In subsequent years, please include only the additional amount budgeted.						
	Implementation Year		Year 2		Year 3	
Base Budget Salaries	$15,000.00		$82,000.00		$123,000.00	
OOE	$15,000.00		$15,000.00		$15,000.00	
Total	$15,000.00		$97,000.00		$138,000.00	

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

- Course conceptualization and development was funded by Kansas State University's Global Campus ($67,139.00).
- Faculty have agreed to teach the classes on a per student basis (not as a part of their assigned teaching load) until the program achieves 15 students.
- Students will be required to purchase a device (e.g., tablet) and associated technology to assist in distance field supervision (approximately $750.00 per student). However, several of the classes plan to design alternative textbooks to offset the costs of technology.
- In the implementation year, KSU's College of Education will fund the salaries of additional personnel to assist with advising as well as placing and supervising field experiences.
- Faclty loads will be modestly impacted by the M.A.T. Most courses are provided in the May intersession, summer, or January intersession or are field experiences that will not count toward faculty load.
- For the three courses (EDCI 791, EDCI 792, and EDCI 760) delivered during the regular academic year that may impact faculty load, the deaprtment chair and Dean have agreed to adjust faculty loads accordingly. To further reduce financial risk, faculty in those classes have agreed to teach the classes on a per student basis (i.e., not as a part of their regular load) if the classes fail to reach 15 students.
- The Dean of the College of Education has committed an additonal $20,000.00 to address additional start-up costs associated with marketing, software, hardware, and unanticipated expenses.

***If the program achieves its goal of 25 students, the program will be self-sustaining in year 1.

Revised: September, 2003

Approved: _____

NEW PROGRAM PROPOSAL
for Master of Arts in Teaching (with recommendation for K-6 teacher certification)

BASIC PROGRAM INFORMATION

1. Proposing Institution
    a. Kansas State University
2. Title of Proposed Program
    a. Elementary Education
3. Degree to be Offered
    a. Master of Arts in Teaching (M.A.T.)
4. Anticipated Date of Implementation
    a. Spring 2016
5. Responsible Units
    a. College of Education
6. Center for Education Statistics, Classification of Instruction Program (CIP) Code
    a. 13.1202 Elementary Education and Teaching

PROGRAM PROPOSAL NARRATIVE

(1) PROGRAM JUSTIFICATION

The quality of the classroom teacher is the single most predictive school-related variable of student academic achievement. Teacher quality is a function of the unique blend of knowledge, skills, and values that individuals bring to the profession. These assertions are supported by decades of education research, and by the policies and expenditures of local, state, and national governments.[1] In short, the ways in which teachers are educated, developed, and mentored matters.

High quality teachers are important at every level but especially important in the elementary school as children build foundational ideas, skills, and attitudes that persist into future schooling and adult life.

The United States Department of Labor lists "elementary school teachers" among the "occupations with the most job growth" and projects that elementary teaching jobs will increase 168,000 (12.3%) by 2022.[2] A growing number of school districts are experiencing teacher shortages and a growing number of Americans are turning to teaching as a second or even third durable career.[3] People's interests change over time and many recognize the importance of teaching as they gain additional life experience.

Yet, traditional pathways to elementary teaching present a host of practical obstacles—financial, educational, and geographic. The proposed Masters of Arts in Teaching (M.A.T.) would open a new pathway to elementary teaching for those who have earned a Bachelor's degree and meet other admission criteria. This pathway would enable qualified Kansans and citizens of other states to earn a M.A.T. and recommendation for Kansas initial teacher license (K-6) in 12 months through a rigorous curriculum delivered by online coursework and field experiences arranged in accredited elementary schools convenient to students in the program.

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[1] Rice, Jennifer King. *Teacher Quality: Understanding the Effectiveness of Teacher Attributes*. Washington, DC: Economic Policy Institute, 2003.
[2] United States Department of Labor, December 19, 2013, *Occupations with the Most Job Growth*, http://www.bls.gov/emp/ep_table_104.htm.
[3] New York Times, August 9, 2015, *Teacher Shortages Spur a Nationwide Hiring Scramble*, http://www.nytimes.com/2015/08/10/us/teacher-shortages-spur-a-nationwide-hiring-scramble-credentials-optional.html?_r=0
New York Times. September 15, 2011, *Teaching as a Second, Even Third, Career*, http://www.nytimes.com/2011/09/16/business/retirementspecial/pursuing-teaching-as-a-second-or-third-career.html?pagewanted=all&_r=0 ;

(a) Is the Program Central to the Mission of the Institution?

The mission of Kansas State University is to foster excellent teaching, research, and service as well as to develop a highly skilled and educated citizenry necessary to advancing the well being of Kansas, the nation, and the international community. The university embraces diversity, encourages engagement and is committed to the discovery of knowledge, the education of undergraduate and graduate students, and improvement in the quality of life and standard of living of those we serve. As a comprehensive, research, land-grant institution, Kansas State University dedicates itself to developing human potential, expanding knowledge, enriching cultural expression, and extending its expertise to individuals, businesses, education, and government.

The mission of the Kansas State University's College of Education is to prepare educators who are knowledgeable, ethical, caring decision makers for a diverse and changing world. This mission is fulfilled through the delivery of exemplary instruction to students at the undergraduate and graduate levels; production, interpretation, and dissemination of sound and useful research and scholarship; leadership, collaboration, and service within the profession; and promotion, understanding, and celebration of diversity.

The proposed M.A.T. contributes to the mission of the university and the College of Education. As a national leader in teacher education, Kansas State University has a responsibility to share its expertise with a broader audience of students, teachers, and schools. The M.A.T. will expand the geographic footprint of the College of Education and enable Kansas State University to reach an underserved pre-service teacher education market (graduate students seeking an initial teacher license in elementary education). The program aims to attract students with diverse backgrounds and experiences.

In particular, the proposed M.A.T. is consistent with the thematic goals of K-State 2025:

Theme 1: Research, Scholarly and Creative Activities, and Discovery

Create a culture of excellence that results in flourishing, sustainable, and widely recognized research, scholarly and creative activities, and discovery in a variety of disciplines and endeavors that benefit society as a whole.

- Students are required to complete *EDCI 760 Action Research in Education*, which introduces the theoretical and practical dimensions of school-based action research and requires completion of an original action research project.
- Students are required to complete *EDCI 890 Master's Project*, in which students prepare and present a portfolio that demonstrates their ability to synthesize and apply research effectively and practice to a panel of scholars.
- In addition, the M.A.T. will open additional avenues for faculty research by expanding the College's network of schools, administrators, and teachers. Many of the United States Department of Education's recent RFPs, for example, require access to diverse students and/or urban schools.

Theme 2: Undergraduate Educational Experience

Build a connected, diverse, empowered, engaged, participatory culture of learning and excellence that promotes undergraduate student success and prepares students for their professional, community, social, and personal lives.

- Not applicable for this proposal.

Theme 3: Graduate Scholarly Experience

Advance a culture of excellence that attracts highly talented, diverse graduate students and produces graduates recognized as outstanding in their respective professions.

- Prospective M.A.T. students must satisfy general and program-specific criteria to gain admission to the program.

  They must satisfy Kansas State University's graduate school admission standards:
  1. Bachelor's degree from an accredited college or university; AND
  2. have an undergraduate GPA of 3.0 or higher in the last 60 hours of coursework or a cumulative GPA of 3.0 or higher).

  In addition, all students are required to demonstrate basic academic competence by ONE of the following:
  1. A GRE score of 301 or higher on Verbal and Quantitative (1,000 combined verbal/quantitative, prior to August 2011), OR
  2. Subtests scores of 150 on Mathematics, 156 on Reading, and 162 on Writing on Educational Testing Services' (ETS) Praxis Core Academic Skills for Educators.

  AND, prospective students will need to demonstrate character traits that are related to academic success as a graduate student. All prospective students will respond to questions developed by COE faculty. Responses will be recorded on CollegeNET and analyzed by the M.A.T. Admissions Committee. The committee reserves the right to conduct follow-up interviews with candidates.
  1. A "pass" from the M.A.T. Admissions Committee based on responses to COE admissions questions and criteria.

- These admission requirements will help to ensure students possess the content background and skills necessary for success as students and teachers.
- Because all aspects of the program will be delivered online, Kansas State University will be able to actively market the program throughout the United States and to people with diverse backgrounds, interests, and talents. After students complete the M.A.T. and receive a Kansas initial teaching license (K-6), teachers are eligible to apply for licensure in any state through existing reciprocity arrangements.[4]
- Students must successfully complete all courses, practica, and field experiences to earn the degree and/or a teaching license.

Theme 4: Engagement, Extension, Outreach, and Service

Be a national leader and model for a re-invented and transformed public research land-grant university integrating research, education, and engagement.

- The M.A.T. inherently integrates research, education, and engagement. Students will learn research-based teaching skills, strategies, and theories; apply these to elementary classrooms and students; and, engage the schools and communities in which they live and work. Students will develop a foundation of ideas, skills, and attitudes that will be used to inform their experiences in schools and classrooms throughout the country.

Theme 5: Faculty and Staff

Foster a work environment that encourages creativity, excellence, and high morale in faculty and staff, responds to changing needs, embraces diversity, values communication and collaboration, and is respectful, trusting, fair, and collegial for all.

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[4] See http://teach.com/where/teaching-in-america/teacher--reciprocity.

- The M.A.T. will broaden the perspectives of faculty by fostering a more diverse student body and increasing connections with a larger group of schools, administrators, teachers, and other education professionals.
- Program development and demand will create needs for additional communication, collaboration, and high-quality faculty.

Theme 6: Facilities and Infrastructure

Provide facilities and infrastructure that meet our evolving needs at a competitive level with our benchmark institutions and are an asset to recruit and retain quality students, faculty, researchers, and staff.

- Increasing the College of Education's ability to conceptualize, deliver, and supervise high-quality distance education programming will provide a competitive advantage with peer institutions.
- The College of Education has successfully piloted distance-based field experience supervision in western Kansas. Distance field experience supervision will be conducted using technology.
- Kansas State University's new Learning Management System, Canvas, is especially well suited to delivery of online programs.

Locational and Comparative Advantages of Program

Although the vast majority of initial teaching licenses are issued through traditional four-year programs, the number of students pursuing non-traditional pathways to teaching has grown dramatically in the United States over the last decade.[5] Since 2000, the number of initial teaching licenses issued through alternative routes has more than doubled.[6] More than one-third (39% or 45,444 students) of those awarded an initial teaching license in 2011 did so through post-baccalaureate or graduate programs.[7]

The United States Department of Education issues an annual *Title II Report,* which provides national and state data about teacher preparation. The most recent report, *Report 13*, describes Kansas data for the 2009-2010 academic year:[8]

- Of 2,995 initial teaching credentials issued in Kansas in 2010, 1,209 or 40% were prepared outside of the state.
- Kansas institutions of higher education maintain 23 traditional and 9 alternative teacher preparation programs.
- Of 2,259 program completers in Kansas in 2010, 248 or 11% were prepared through alternative programs.

Although several Kansas universities offer online Bachelor's degrees, Master's degrees, and/or graduate certificates (e.g., Fort Hays State, Emporia State, Baker University) the M.A.T. at Kansas State would be the first exclusively online, graduate degree that simultaneously leads to K-6 licensure.

Nationally, alternative pathways to teacher licensure most often focus on secondary teachers and/or teaching in urban areas. A few of the large, exclusively online universities (e.g., Western Governors University, Liberty Online University, University of Phoenix, and American College of Education) and a handful of traditional universities (e.g., University of Southern California, Drexel University, Grand Canyon University, and Southern New Hampshire University) offer a graduate degree (M.A.T. or M.S.) in education and initial elementary licensure.

Universities and Colleges Providing Online Master's Degree with Elementary Teacher Certification

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[5] Ludlow, Carlyn. 2013. "Alternative Pathways: Filling a Gap?." *Education & Urban Society* 45, no. 4: 440-458.

[6] United States Department of Education, https://title2.ed.gov/Public/TitleIIReport13.pdf.

[7] American Association of Colleges for Teacher Education, http://aacte.org/resources/peds.

[8] United States Department of Education, https://title2.ed.gov/Public/TitleIIReport13.pdf.

University or College	Total Hours	Tuition & Fees	Admission Criteria
American College of Education	34	$8,310.00	Document successful completion of an undergraduate degree or post-baccalaureate degree from a regionally accredited institution with a cumulative GPA of 3.0, OR if an applicant has a cumulative GPA below 3.0 but above 2.5, he/she must have at least 5 years of documented professional experience related to the content area in which the applicants seeks licensure; provide evidence of Indiana passing scores on standardized tests and other requirements as specified by the Indiana Department of Education; pass criminal background check from Safe Hiring Solutions.
Drexel University	42	$35,406.00	Bachelor's degree from a regionally accredited institution; undergraduate GPA of 3.0 or higher (graduate degree GPA will be considered along with the undergraduate GPA); students with a GPA under a 3.0 will be considered on a case by case basis; two letters of recommendation; an essay describing interest in the program.
Grand Canyon University	47	$47,235.00	Undergraduate degree from an accredited, GCU-approved college, university or program with a GPA of 2.8 or better on the degree-bearing transcript OR a graduate degree from an accredited, GCU-approved college, university or program; if students cannot meet the GPA requirement, they may still be eligible for admission by meeting certain graduate test scores: Graduate Management Admissions Test (GMAT): 500, Graduate Record Examination (GRE): 1,000 combined verbal/quantitative, prior to August 2011; 300 combined verbal/quantitative, after August 2011
Kansas State University	31	$15,994.10	Bachelor’s degree from an accredited college or university and have an undergraduate GPA of 3.0 or higher in the last 60 hours of coursework or a cumulative GPA of 3.0 or higher; demonstrate basic academic competence by 1) A combined GRE score of 301 or higher on Verbal and Quantitative (1,000 combined verbal/quantitative, prior to August 2011), or 2) subtests scores of 150 on Mathematics, 156 on Reading, and 162 on Writing on Educational Testing Services’ (ETS) Praxis Core Academic Skills for Educators. In addition, students must earn a “pass” from the M.A.T. Admissions Committee based on their responses to COE admissions questions and criteria.
Liberty Online University	34	$17,755.00	Bachelor’s degree and an undergraduate GPA above 3.0 and review of undergraduate transcript to satisfy requirements for elementary licensure.
Southern New Hampshire University	42	$26,334.00	Bachelor’s degree and an undergraduate GPA above 2.5.
University of Phoenix	44	$26,000.00	Undergraduate degree from a regionally accredited

			college or university, or have a comparable degree from a recognized institution outside the United States, and a cumulative GPA of 2.5; provide verification of a minimum of three years of significant full-time, post-high school work experience, which includes 18 months of instructional experience in a P–12 setting. (California residents require three years of instructional experience plus a current California credential); be currently employed. If you are not currently employed, you must have access to an organizational environment that allows you to apply the concepts you learn in our courses; be a citizen or permanent resident of the United States or hold an approved, valid visa, as all applicants to Master of Arts in Education programs must reside in the United States; not have been expelled from a previous institution.
University of Southern California	32	$51,264.00	Bachelor's degree or its recognized equivalent from an accredited institution A superior scholastic record, normally above a 3.0 GPA; the ability to communicate effectively (both written and verbal) as demonstrated by academic performance and/or professional experience; a "Statement of Purpose" that clearly indicates professional career goals and reasons for seeking the degree.
Western Governors University	41	4 years: $23,120.00 3 years: $17,340.00	Transcript verifying receipt of a baccalaureate degree (B.A. or B.S.) from a regionally accredited institution; must also meet specific admissions requirements for the state in which you reside, which can include state-specific basic skills tests (such as the PRAXIS I and/or II); meet these state-specific requirements prior to beginning the Foundations of Teaching area of study.

The table above suggests that the proposed M.A.T. will employ higher admissions standards and be provided at less cost than most other universities with similar programs.

Kansas State University's brand also represents a competitive advantage. Kansas State University's College of Education is a national leader in teacher education and online programing:

- 2014 "Distinguished Program: Credit Award for Academic Advising," Association for Continuing Higher Education's (ACHE).
- 2012 "Best Practice Award in Professional Ethics and Moral Dispositions," American Association of Colleges for Teacher Education (AACTE).
- 2011 "Exemplary Professional Development School Achievement," National Association for Professional Development Schools' Award (NAPDS).
- 2010 "Distinguished Elementary Education Program in Teacher Education Award," Association of Teacher Educators (ATE).

The College of Education's Office of Field Experience has successfully piloted the technologies required for distance field experience placement and supervision in western Kansas. M.A.T. students will be required to obtain a tablet (e.g., iPad) and Swivl technology.[9] The combination of these technologies enables real-time and video classroom observations and evaluations. Field experience supervisors can

[9] See http://www.swivl.com.

comment on specific parts of a teaching performance and replay those parts in the post-lesson conference. In the last 18 months, the College of Education has provided all faculty instructional technology professional development. Curriculum and Instruction faculty have successfully implemented a one-to-one tablet initiative and transferred courses to a new and more powerful learning management system, Canvas.

The requirements for teacher licensure vary by state. M.A.T. students who satisfy program and state requirements (ETS's *Principles of Learning and Teaching K-6* and *Elementary Education: Curriculum, Instruction, and Assessment*) will receive an initial Kansas K-6 teaching license. Every state will accept the initial Kansas K-6 teaching license though some states may require additional coursework or testing.[10]

(b) What is the Student Demand for the Program and what are the Characteristics of the Students Who Will Participate in the Program?

It is expected that applicants for admission will primarily come from people seeking a career change (e.g., military, loss of job, retired, change of interests, etc.). Elementary education offers individuals choosing a second career a fulfilling, rewarding, and durable occupation. The anecdote below from *the New York Times* has become commonplace throughout the United States:[11]

> *GAIL R. RUSCETTA changed careers for the first time when she had children. A theater major who bounced between acting gigs in her 20s, Ms. Ruscetta took the kind of leap that overachieving city dwellers often fantasize about: She and her then husband moved to Montana and opened a horse farm and riding school. Fifteen years later, Ms. Ruscetta — who was an active volunteer in her children's classrooms and then helped home-school them — was going through a divorce. Time for another career switch. This time, she decided to try teaching. Ms. Ruscetta, 57, moved to Virginia and enrolled in a yearlong, $3,500 training course designed by the state Education Department for career changers.*

Teaching is now attracting thousands of career-changers annually.[12]

According to a recent article in *Education Week*, the demand for online teacher preparation is "booming."[13] The most comparable university and program in the United States is the one offered by the University of Southern California (USC). In the first three years of its program (2009 – 2012), 3,600 students have enrolled and 1,700 students have graduated from USC's online, M.A.T. with elementary or secondary certification.[14] Prior to implementing its online M.A.T. programs, USC prepared about 50 new teachers per year.

The M.A.T. is designed for a national market, career-changers, and working adults. Many of the online classes will be taught asynchronously, which provides flexibility and may increase demand. Additionally, this program provides multiple avenues (GRE and CORE) by which prospective teachers may demonstrate sufficient content knowledge in lieu of having to expend additional resources (i.e., time and money) on undergraduate classes. This is a key feature of the program and also may impact demand.

The College of Education currently offers the TELRN program. The TELRN program provides an on-campus, graduate pathway to recommendation for secondary teacher certification. Even in a relatively

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[10] See http://teach.com/where/teaching-in-america/teacher--reciprocity.

[11] New York Times (2013). http://www.nytimes.com/2011/09/16/business/retirementspecial/pursuing-teaching-as-a-second-or-third-career.html?pagewanted=all&_r=0

[12] Ibid.

[13] Sawchuk, Stephen. 2013. "Online Teacher Prep Proliferates, But For-Profits Dominate Market." *Education Week* 33, no. 7: 1-17.

[14] Ibid.

limited market (i.e., within geographic proximity to K-State) with a limited scope (i.e., recommendation for secondary certification only), the program attracts approximately 25 students per year.

The College of Education has set the following enrollment goals for its M.A.T. program:

	2016-2017	2017-2018	2018-2019
Anticipated M.A.T. Enrollment	25	50	75

(c) What is the Demand for Graduates of this Program?

The United States Department of Labor lists "elementary school teachers" among the "occupations with the most job growth" and projects that elementary teaching jobs will increase 168,000 (12.3%) by 2022.[15]

National economic forces and demographic trends may also increase demand for teachers nationwide. As the national economy gains momentum, schools will seek to backfill positions left open in the last five years. The United States Department of Education estimates that more than one million teachers will retire in the next four to six years.[16]

Every year, representatives from scores of school districts throughout the United States come to the Kansas State University campus to recruit teachers. The K-State brand has a national reputation that will also increase demand for its M.A.T. graduates. As of 2014, 97% of new graduates of the College of Education are employed, are enrolled in graduate/professional school or further education, or are occupied in other non-career activities.

(2) CURRICULUM OF THE PROPOSED PROGRAM

The goals and objectives of the Master of Arts in Teaching program are designed to provide talented and ambitious career changers with the knowledge, skills, and tools necessary to be independent, effective, concerned, and knowledgeable teachers. The M.A.T. program is designed to enable students to construct a well-developed and thoughtful intellectual framework that helps them to make sound educational decisions based upon the myriad of factors that influence those decisions and the abilities to act on those decisions. The curriculum emphasizes conceptual understanding, synthesis, and application; research-based theories, skills and strategies; as well as practical standards- and performance-based outcomes.

High quality teacher education programs provide valuable frames of reference that help teachers perceive, analyze, and evaluate the classroom environment as well as the social and intellectual skills to act on those decisions. The curriculum of the M.A.T. will equip students with tools they can use to continuously improve their teaching, define their roles, and engage students, parents, and colleagues.

Specifically, the M.A.T. curriculum focuses development of the following themes:

- *Practical Wisdom and Judgment*. Knowing what is best, right, or good in a particular context. The M.A.T. will prepare students to interpret, analyze, and engage the classroom through case studies, video analysis, critical essays, and teaching performances.

- *Context of Education*. Teachers work within a larger historical, philosophical, and social context. The M.A.T. helps pre-service teachers to identify, consider, and evaluate the broader forces that influence their work as teachers.

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[15] http://www.bls.gov/emp/ep_table_104.htm.

[16] New York Times. http://www.nytimes.com/2011/09/16/business/retirementspecial/pursuing-teaching-as-a-second-or-third-career.html?pagewanted=all&_r=0.

- *Pedagogical Content Knowledge.* A blend of knowledge about content, students, and teaching specifically for pedagogical purposes. The M.A.T. requires students to plan, deliver, and reflect upon clear, coherent, and standards-based instruction through course plans, unit plans, lesson plans, and teaching performances.

- *Research-Based Teaching Skills.* Skills such as clarity, questioning, variety, high expectations for success, use of time, monitoring, feedback and reinforcement. Research-based teaching skills are embedded in M.A.T. assessments of student performance such as rubrics for teaching performance, instructional planning, and reflection.

- *Research-Based Teaching Strategies.* Strategies such as comparing, contrasting, classifying, analogies, and metaphors; summarizing and note-taking; vocabulary building; reinforcing effort and giving praise; homework and practice; nonlinguistic representation; cooperative learning; setting objectives and providing feedback; generating and testing hypotheses; cues, questions, and advance organizers.[17] Research-based teaching strategies are embedded and modeled in every M.A.T. course.

- *Classroom Management and Motivation*. The M.A.T. curriculum will develop individual and group motivation; environment of respect and rapport; culture and community of learning; student behavior and classroom management. Principles of positive classroom management and motivation are embedded and modeled in every course.

- *Professionalism*. Becoming a professional educator includes dispositions such as advocating for students and families; caring and inclusive regard for humanity; collaboration with school personnel; professional, ethical behaviors; and thoughtful reflection on practice. Professionalism is an explicit part of every M.A.T. class and field experience.

(a) Describe the More Important Academic Objectives of the Proposed Program, Including the Range of Skills and Knowledge Future Graduates will Possess.

Upon completion of the of the Master of Arts in Teaching, students will:

Knowledge

- demonstrate knowledge of the origins, development, and contemporary significance of issues, models, and practices in curriculum theory and practice.
- demonstrate practical knowledge of education research including its methodologies, interpretations, and potential classroom applications.
- demonstrate sound pedagogical content knowledge.

Skills

- demonstrate the ability to use research-based skills and strategies that positively impact student learning and classroom environment.
- demonstrate the ability to accurately interpret, analyze, and evaluate issues of curriculum, instruction, assessment, and classroom management before, during, and after teaching.
- demonstrate effective use of a variety of communication skills and modalities.
- demonstrate awareness, understanding, and skills necessary to adapt instructions based on diversity of learners.
- demonstrate the ability to use technology to promote student learning.

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[17] Marzano, Robert J. *The Art and Science of Teaching: A Comprehensive Framework for Effective Instruction*. Alexandria, VA: Association of Supervision and Curriculum Development, 2007.

Professional Dispositions

- demonstrate a commitment to continued learning, growth, and scholarly activity.
- demonstrate a commitment to work collaboratively with others in their professional role, provide leadership in interactions with peers, and contribute to the profession.
- recognize and address moral and ethical responsibilities within their profession and practice professional ethics.

The Graduate School admission's procedures will be followed for the master's degree, which requires approval of the Dean of the Graduate School upon the recommendation of faculty in the program. Students must hold a bachelor's degree from an accredited college or university and have an undergraduate GPA of 3.0 or higher in the last 60 hours of coursework or a cumulative GPA of 3.0 or higher. International students must demonstrate similar levels of achievement (i.e., hold a degree from an established institution comparable to a college or university in the United States, have an outstanding undergraduate record, have the demonstrated ability to do graduate work, and provide evidence of language proficiency sufficient for the pursuit of a graduate degree). The Graduate School requires international students whose native language is not English to demonstrate competence in the English language by achieving a satisfactory score on the Test of English as a Foreign Language (TOEFL), the International English Language Testing System (IELTS) or Pearson Test of English (PTE).

In addition, all prospective M.A.T. students are required to demonstrate basic academic competence by 1) A GRE score of 301 or higher on Verbal and Quantitative (1,000 combined verbal/quantitative, prior to August 2011), or 2) subtests scores of 150 on Mathematics, 156 on Reading, and 162 on Writing on Educational Testing Services' (ETS) Praxis Core Academic Skills for Educators ***and*** students must earn a "pass" from the M.A.T. Admissions Committee based on their responses to COE admissions questions and criteria.

(b) The coursework required of all students who major in this program shall be described.

All courses will be delivered online through a cohort model. Until demand justifies additions, one cohort of students will be admitted per year beginning in the Spring Intersession (May), 2016. All course are required and there are no electives.

Semester	Courses	Hours
Intersession	EDCI 710 Social Foundations of Education	3
Summer	EDCI 702 Curriculum, Instruction, and Assessment EDCI 716 Teaching Diverse Learners	3 3
Fall	EDCI 791 Teaching Science and Mathematics in the Elementary School EDCI 792 Teaching Social Studies, Reading, and Literacy in the Elementary School EDCI 800 Teaching Practicum	4 4 2
Intersession	EDCI 793 Teaching Health, Movement, and Fine Arts in the Elementary School	4
Spring	EDCI 801 Internship in K-12 Schools EDCI 760 Action Research in Education EDCI 890 Master's Project	4 3 1
TOTAL		31

(c) Internships and practica required of students in this program shall be described.

Students will complete a two-credit hour practicum (EDCI 800) and a four-credit hour teaching internship (EDCI 801). Students are responsible for selecting three appropriate field experience sites (must be accredited elementary schools and meet minimum diversity standards) and obtaining a tablet and Swivl technology to allow remote observation (approximate cost $750.00). The Office of Field Experience will contact the school districts and arrange placement. Participating school districts and teachers will receive nominal compensation and/or professional development at KSU.

(d) If clinical are required, are sufficient sites available?

- Not applicable to this program.

(3) PROGRAM FACULTY

Faculty Member	Degree, Appt., Type	Time Allocated to M.A.T. Program	Credentials and Role in the Program
F. Todd Goodson, Chair of Curriculum and Instruction	Ph.D., tenured, Department Chair	10% Subsumed as part of chair responsibilities.	Dr. Goodson is Associate Professor and chair of the Department of Curriculum and Instruction. Dr. Goodson's 25-year career as a teacher educator has influenced the lives of thousands of teachers and hundreds of teacher educators. Goodson is a Nationally Board Certified Early Adolescence/English Language Arts, former editor of the *Journal of Adolescent and Adult Literacy*, and author of dozens of journal articles, book chapters, and reviews. Professor Goodson will oversee all aspects of program conceptualization, development, implementation, and revision.
Thomas S. Vontz, Professor	Ph.D., tenured, faculty	25% Compensated per student until courses/program reaches 15 students.	Dr. Vontz is Professor and Director of the College of Education's Center for Social Studies Education. He has provided professional development (both face-to-face and online) to hundreds of teachers across the United States and throughout the world. Currently, he serves as Executive Associate Editor for the *Encyclopedia of American Governance*, which is due to published in 2016 by Cengage. Professor Vontz will coordinate the MAT program as well as teach *Curriculum, Instruction, and Assessment* and co-teach *Teaching Social Studies, Reading, and Literacy in the Elementary School*.
Lotta Larson, Associate Professor	Ph.D., tenured, faculty	15% Compensated per student until courses/program reaches 15 students.	Dr. Larson is Associate Professor who specializes in elementary English/Language Arts with a particular focus on the uses of technology to foster literacy learning. Larson is the author and/or developer of a number of journal articles, book chapters, reviews, and curriculum materials. She has won or been nominated for a number of department, college, and university awards such as K-State Women of Distinction, Excellent in Graduate Teaching, and Excellence in Advising. Professor Larson will teach *Health, Movement, and Fine Arts* as well as well as co-teach *Teaching Social Studies, Reading, Literacy in the Elementary School*.
David Allen, Associate Professor	Ed.D., tenured, Director of Field Experiences	15% Subsumed as part of director responsibilities.	Dr. David S. Allen, Associate Professor and Director of Field Experiences, is a former elementary and middle level mathematics teacher and has been with the Department of Curriculum and Instruction for 14 years. Dr. Allen coordinates all field experiences for the College of Education and teaches graduate level math education courses. His current research interests are related to distance supervision of undergraduate pre-service teachers and the use of technology to further the professional growth of both student teachers and cooperating teachers. Professor Allen will oversee all aspects of the M.A.T. field experiences in particular the *Teaching Practicum* and *Internship in the K-12 Schools.*
Kay Ann Taylor, Associate Professor	Ph.D., tenured, Director of C & I Graduate Programs	10% Subsumed as part of director responsibilities.	Dr. Taylor is an Associate Professor whose expertise is the social foundations of education and technology integration. Taylor is the author of a number refereed journal articles and book chapters. She is the recipient of several college and university awards, including Excellence in Undergraduate Teaching, K-State Women of Distinction, Presidential Faculty/Staff Award for Distinguished Service to Historically Underrepresented Students, and the nominee for the Excellence in Advising Award, Excellence in Graduate Teaching

			Award. Professor Taylor will oversee the teaching for *Social Foundations of Education* as well as *Teaching Diverse Learners*. Della Perez, Ph.D., will teach *Social Foundations* and Vicki Sherbert, Ph.D., will teach *Teaching Diverse Learners*. Both are assistant professors in the College of Education. These courses will occupy 10% of their time.
David Griffin, Associate Professor	Ph.D., tenured, Assistant Dean and Director	5% Subsumed as part of director responsibilities.	Dr. Griffin is Assistant Dean and Director of the Center for Student and Professional Services. Griffin is a former high school teacher and administrator and has been a faculty member at Kansas State University for more than 20 years. Professor Griffin will oversee all aspects of student advising.
Chepina Rumsey, Assistant Professor	Ph.D., tenure-track	15% Compensated per student until course/program reaches 15 students.	Dr. Chepina Rumsey is an assistant professor in the department of Curriculum and Instruction, with a focus on elementary mathematics education. Specifically, she is interested in studying arithmetic properties and number sense, mathematical argumentation and proof, and sociomathematical norms that promote discourse. She teaches and coordinates the elementary math methods course at Kansas State University and supervises practicum students and interns in local schools. Professor Rumsey will teach ***Teaching Science and Mathematics in the Elementary School.***
Laurie Curtis, Assistant Professor	Ph.D., Non tenure track	10% Compensated per student until course/program reaches 15 students.	Dr. Curtis is an assistant professor in the department of Curriculum and Instruction that specializes in literacy instruction and intervention. She brings more than 20 years experience as an elementary teacher and more than 10 years experience as a scholar/researcher. She has previously taught a wide variety of undergraduate and graduate classes at KSU, including research courses. Professor Curtis will teach *Action Research*.

Number of Graduate Assistants Needed to Serve Program

All courses in the M.A.T. will be taught by faculty members and not by GTAs. The program will require, however, additional clinical supervisors and cooperating teachers to support distance field experiences.

(4) ACADEMIC SUPPORT

(a) What are the Academic Support Services for this Program?

The College of Education's Center for Student and Professional Services (CSPS) faculty and staff will provide academic advising for the M.A.T. CSPS will assist students in all aspects of the program—satisfying admission requirements, enrolling in courses, registering for exams, and applying for licensure. In addition, each student will be assigned an academic mentor, a Curriculum and Instruction faculty member who will assist with academic issues or problems.

The CSPS advising team includes:

- David Griffin, Assistant Dean and Associate Professor
- Diane Murphy, academic advisor
- Sandra Avalos, academic advisor
- Kelly Briggs, academic advisor
- Mechelle Martinez, academic advisor
- Lindsey Morford, academic advisor
- Elizabeth Rowe, academic advisor

Continuous improvement and ensuring quality is an issue of major importance to the continued success of the program. The following Education faculty will have direct, daily contact with students through instruction, advising, and committee leadership and membership:

- Todd Goodson, Chair of Curriculum and Instruction and Associate Professor
- Thomas S. Vontz, Professor
- Kay Ann Taylor, Director of Graduate Education and Associate Professor
- David Allen, Director of Field Experiences and Associate Professor
- Lotta Larson, Associate Professor
- Vicki Sherbert, Assistant Professor
- Della Perez, Assistant Professor

Field experiences are a significant component of the M.A.T. and often require additional support. For each field experience students will be assigned 1) a classroom cooperating teacher and 2) a field experience supervisor based at Kansas State University. David Allen, the College of Education's Director of Field Experiences will oversee all aspects of field experience placement and supervision.

(5) FACILITIES AND EQUIPMENT

(a) What are the Anticipated Facilities Requirements?
No additional space requirements, facilities, renovations will be immediately needed.

(b) What New Equipment will be Required Beyond Normal Additions?
No new equipment will be needed.

(6) PROGRAM REVIEW, ASSESSMENT, AND ACCREDITATION

(a) What Program Review Process Methods will be used to Review the Program?
The M.A.T. will be subject to continuous review by graduate faculty in the Department of Curriculum and Instruction. Faculty will be invited to raise issues and help solve problems at monthly departmental and graduate faculty meetings. Students will be asked to complete surveys at the mid-point and conclusion of their program to help faculty improve various aspects of the program. Data from the surveys and student assessments will be aggregated, reported, and used for program refinement and improvement. The program will also be subject to accreditation review by the Kansas State Department of Education and the National Council for Accreditation of Teacher Education (NCATE).

(b) What Student Learning Outcomes Measures Will Be Used to Assess the Program's Effectiveness?
The student learning outcomes (SLOs) for the proposed M.A.T. are based on the College of Education's Conceptual Framework, the Council of Chief State School Officer's Interstate Teacher Assessment and Support Consortium (InTASC) Standards, and the National Council for Accreditation of Teacher Education (NCATE) standards. The SLOs are clear, measurable, and connected to specific assessments in the MA.T:

- **SLO #1**: The educator is a reflective practitioner who uses an understanding of historical, philosophical, and social foundations of education to guide his or her educational practices.
- **SLO #2**: The educator understands the role of technology in society and demonstrates skill in using instructional tools and technology to gather, analyze, and present information; enhance instructional practices; facilitate professional productivity and communication; and help all students use instructional technology effectively.
- **SLO #3**: The educator demonstrates an understanding of how individuals learn and develop intellectually, socially, and personally and provides learning opportunities that support this development.

- **SLO #4**: The educator demonstrates the ability to provide different approaches to learning and creates instructional opportunities that are equitable, that are based on developmental levels, and that are adapted to diverse learners, including those with exceptionalities.
- **SLO #5**: The educator demonstrates the ability to use the central concepts, tools of inquiry, and structures of each discipline the educator teaches and can create opportunities that make these aspects of subject matter meaningful for all students.
- **SLO #6**: The educator demonstrates the ability to integrate across and within content fields to enrich the curriculum, develop reading and thinking skills, and facilitate all students' abilities to understand relationships between subject areas.
- **SLO #7**: The educator plans effective integrated and coherent instruction based upon the knowledge of all students, home, community, subject matter, curriculum standards, and current methods of teaching reading.
- **SLO #8**: The educator understands and uses formal and informal assessment strategies to evaluate and ensure the continual intellectual, social, and personal development of all learners.
- **SLO #9**: The educator uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.
- **SLO #10**: The educator understands and uses a variety of appropriate instructional strategies to encourage and develop various kinds of students' learning, including critical thinking, problem solving, and reading.
- **SLO #11**: The educator uses a variety of effective verbal and non-verbal communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.
- **SLO #12**: The educator is a reflective practitioner who continually evaluates the effects of his or her choices and actions on others (students, parents, and other professionals in the learning community), actively seeks out opportunities to grow professionally, and participates in the school improvement process (Kansas Quality Performance Accreditation [QPA]).
- **SLO #13**: The educator fosters collegial relationships with school personnel, parents, and agencies in the larger community to support all students' learning and well-being.
- **SLO #14**: The educator demonstrates practical knowledge of education research including its methodologies, interpretations, and potential classroom applications.

Formative and summative assessments will be used throughout the M.A.T. to measure student achievement of the SLOs. One of the key assessments, however, is associated with development and presentation of the M.A.T. Teaching Portfolio. The M.A.T. Teaching Portfolio consists of the following:

- Entry 1: Professional and Philosophical Platform
- Entry 2: Contextual Implications and Student Learning Adaptations
- Entry 3: Instructional Unit Plan
  - Part 1: Learning Goals and Objectives
  - Part 2: Instructional Design
  - Part 3: Analysis of Assessment Procedures Part 4: Self Evaluation of Unit
- Entry 4: Analysis of Classroom Learning Environment
- Entry 5: Formal Observations (5)
- Entry 6: Professional Logs

Students will submit and present their portfolio to a panel of three faculty members. Faculty will use the following rubrics to evaluate their written and oral performance and mastery of SLOs.

MAT Rubric for Entry 1: Philosophy of Education				
Rating → **Indicator ↓**	**0** **Performance Not Demonstrated**	**1** **Performance Partially Demonstrated**	**2** **Performance is Demonstrated**	**SLOs**
Knowledge and understanding of the historical, social, and political influences on learning and teaching.	The philosophy does not exemplify any knowledge base or understanding of the historical, social, **or** political influences on learning and teaching of students.	The philosophy exemplifies some knowledge base and understanding of the historical, social, **or** political influences on learning and teaching.	The philosophy exemplifies a strong knowledge base of the historical, social, **and** political influences on learning and teaching.	**1**
The beliefs and vision for effectively teaching ALL students.	The philosophy does not address the teacher's beliefs **or** vision for effectively teaching ALL students.	The philosophy partially addresses the teacher's beliefs **or** vision for effectively teaching ALL students.	The philosophy fully addresses the teacher's beliefs **and** vision for effectively teaching ALL students.	**1**
The belief in the inherent dignity of all and respects customs and beliefs of diverse groups	The philosophy of education does not provide evidence that the teacher believes in the inherent dignity of all people and respects the customs and beliefs of diverse groups.	The philosophy of education provides evidence that the teacher believes in the inherent dignity of all people and respects the customs and beliefs of diverse groups.	The philosophy of education provides strong evidence that the teacher believes in the inherent dignity of all people and respects the customs and beliefs of diverse groups.	**1**
Advocacy for students and families and a caring and inclusive regard for humanity.	The philosophy does not reflect advocacy for students and families **or** a caring and inclusive regard for humanity.	The philosophy partially reflects advocacy for students and families **or** a caring and inclusive regard for humanity.	The philosophy fully reflects advocacy for students and families **and** a caring and inclusive regard for humanity.	**1**

MAT Rubric for Entry 2: Contextual Information and Implications for Student Learning				
Rating → **Indicator ↓**	**0** **Performance Not Demonstrated**	**1** **Performance Partially Demonstrated**	**2** **Performance is Demonstrated**	**SLOs**
Knowledge and use of Appropriate Adaptations	Teacher does not describe any strategies for providing equitable opportunities, accommodations, or modifications in relation to classroom contextual information.	Teacher describes some strategies for providing equitable opportunities, accommodations, or modifications; but, they do not address all students identified under the contextual information or adaptations are too general and not related to specific student needs or classroom activities.	Teacher describes at least one specific strategy for providing equitable opportunities, accommodations, or modifications for any student identified under contextual information.	**3**
Knowledge of ALL student characteristics (developmental levels, prior knowledge, and interests) and implications for planning and instruction.	Teacher does not demonstrate knowledge of **ALL** student characteristics and does not consider the implications for planning or instruction.	Teacher demonstrates knowledge of **ALL** student characteristics, but does not consider the implications for planning and instruction to meet the needs of **ALL** students.	Teacher demonstrates knowledge of **ALL** student characteristics and offers detailed and appropriate implications for planning and instruction to meet the needs of **ALL** students.	**3**
Knowledge of the FOCUS student characteristics (developmental levels, prior knowledge, and interests) and implications for planning and instruction.	Teacher does not demonstrate knowledge of **FOCUS** student characteristics and does not consider the implications for planning or instruction.	Teacher demonstrates knowledge of **FOCUS** student characteristics, but does not consider the implications for planning and instruction to meet the needs of the **FOCUS** students.	Teacher demonstrates knowledge of the **FOCUS** student characteristics and offers detailed and appropriate implications for planning and instruction to meet the needs of the **FOCUS** students.	**3**
Knowledge of environmental factors (district, school, classroom, community, and family) and implications for planning and instruction.	Teacher does not demonstrate knowledge of environmental factors or consider the implications for planning instruction.	Teacher demonstrates knowledge of environmental factors, but does not consider implications for planning to meet the needs of students.	Teacher demonstrates knowledge of environmental factors and offers reasonable implications that impact plans to meet students' needs.	**4**
Flexibility and Responsiveness	Teacher does not demonstrate flexibility or responsiveness in seeking out and using a variety of strategies to meet the cognitive, physical, emotional, or social needs of students in his or her classroom.	Teacher demonstrates some flexibility and responsiveness in seeking out and using a few strategies to meet the cognitive, physical, emotional, or social needs of some students in his or her classroom	Teacher demonstrates flexibility and responsiveness in seeking out and using a variety of strategies to meet the cognitive, physical, emotional, and social needs of all students in his or her classroom	**4**

MAT Rubric for Entry 3, Part 1 (Learning Goals and Objectives)				
Rating → **Indicator ↓**	**0** **Performance Not Demonstrated**	**1** **Performance Partially Demonstrated**	**2** **Performance is Demonstrated**	**SLOs**
Alignment of Learning Goals and Objectives	Leaning goals and objectives are not aligned with state content standards or school improvement goals.	Learning goals and objectives are aligned with state content standards and school improvement goals but are not fully integrated into instruction or assessments.	Learning goals and objectives are aligned with state content standards and school improvement goals and are integrated into instruction and assessments.	**11**
High Expectations	Learning goals and objectives do not reflect high expectations and include only low-level objectives (simple facts, recall, recognition, identification).	Learning goals and objectives reflect some high expectations but include mostly low-level objectives.	Learning goals and objectives reflect high expectations and include a balance of low and high level objectives **or** mostly high-level objectives (comprehension, analysis, etc).	**9**
Significance of Learning Goals and Objectives	Learning goals and objectives do not represent central concepts and/or skills in the subject area of importance to students**.**	Some of the learning goals and objectives represent central concepts and/or skills in the subject area of importance to students.	Most of the learning goals and objectives represent important concepts and/or skills in the subject area of importance to students.	**5**

MAT Rubric for Entry 3, Part 2: Instructional Design				
Rating → Indicator ↓	**0 Performance Not Demonstrated**	**1 Performance Partially Demonstrated**	**2 Performance is Demonstrated**	**SLOs**
Multiple Learning Strategies	Only one instructional strategy is used throughout the unit.	A few instructional strategies are incorporated throughout the unit, but they are not designed to meet the diverse cognitive, physical, emotional, and social needs of all students.	Multiple instructional strategies are incorporated throughout the unit to meet the diverse cognitive, physical, emotional, and social needs of all students.	**7**
Adaptations/Differentiation and Equitable Learning opportunities to Meet the Needs of All Students	The teacher does not address implications of contextual, pre-assessment/ diagnostic information in planning instruction and assessment; no adaptations are considered.	Adaptations/differentiation and equitable learning opportunities are too general and do not address the **specific** contextual information, pre-assessment/ diagnostic information identified.	Adaptations/differentiation and equitable learning opportunities are designed to address the **specific** contextual information, pre-assessment/diagnostic information identified.	**4**
Active Inquiry, Learner Centered, and Meaningful Student Engagement	The unit design includes no opportunities for active inquiry. The instruction is teacher centered and not meaningful.	The unit design includes opportunities for engaging students only in passive forms of inquiry that are not meaningful and/or are teacher controlled (e.g. specific set exercises, a prescribed product).	The unit design includes opportunities that meaningfully engage students in active inquiry (questioning concepts, developing learning strategies, seeking resources, and conducting independent investigations).	**7**
Integration of Technology	The unit design does not include technology.	Technology is used only by the teacher and/or is used without regard to learning outcomes (i.e., an add-on just to fulfill the requirement).	The teacher integrates technology into planning and instruction. The students use technology to enhance their learning.	**2**
Integration of Reading Strategies	The teacher presents no evidence that reading strategies have been integrated into the unit.	The teacher presents evidence that only one or two reading strategies have been integrated into the unit. These strategies provide support for a limited range of reading concerns and abilities.	The teacher presents evidence that three or more reading strategies have been integrated into the unit. These strategies provide support for a wide range of reading concerns and abilities.	**10**
Integration of Critical Thinking Strategies	The teacher presents no evidence that critical thinking strategies have been integrated into the unit.	The teacher provides evidence that critical thinking strategies have been integrated into the unit, but does not apply those strategies to help students learn the concepts and skills being taught.	The teacher provides evidence that critical thinking skills have been integrated into the unit and applies those strategies to help students learn the concepts and skills being taught.	**10**
Integration Across and Integration Within Content Fields	The teacher presents no evidence that he/she is integrating knowledge, skills, or methods of inquiry across or within content fields.	The teacher provides evidence that he/she is integrating knowledge, skills, or methods of inquiry across or within content fields, but this integration does not help students understand relationships between subject areas.	The teacher provides evidence that he/she is integrating knowledge, skills, or methods of inquiry across and within content fields to help students understand relationships between subject areas.	**6**
Community Resources	The teacher does not attempt to use *community resources* to foster learning.	The teacher uses *community resources* to foster learning, but they are not related to the objectives of the unit.	The teacher uses *community resources* to foster learning and it is directly connected to the unit's objectives.	**13**

MAT Rubric for Entry 3, Part 3: Analysis of Assessment Procedures				
Rating → Indicator ↓	**0 Performance Not Demonstrated**	**1 Performance Partially Demonstrated**	**2 Performance is Demonstrated**	**SLOs**
Pre-Assessment/ Diagnostic Assessment is Utilized for Planning and Instructional Decision-Making	No pre-assessment/ diagnostic data are collected, or the data/information collected is not appropriate for (aligned with) unit objectives.	Appropriate student pre-assessment/diagnostic assessment data are collected, but not used for planning or instructional decision-making.	Appropriate student pre-assessment/diagnostic assessment data are collected and used in planning and instructional decision-making before the unit is taught.	**8**
Formative Assessment is Utilized for Planning and Instructional Decision-Making	No formative assessment data are collected, or the data/information collected is not appropriate for (aligned with) unit objectives.	Appropriate formative student assessment data are collected, but not used for planning or instructional decision-making to help all students achieve success.	Appropriate formative student assessment data are collected and used in planning and instructional decision-making as the unit is taught to persistently help all students achieve success.	**8**
Summative Assessment is Utilized for Planning and Instructional Decision-Making	No summative assessment data are collected, or the data/information collected is not appropriate for (aligned with) unit objectives.	Appropriate summative student assessment data are collected, but not used for planning or instructional decision-making to enhance future success.	Appropriate summative student assessment data are collected and used in planning and decision-making to enhance future success.	**8**
Multiple Formats for Assessment	Only one assessment format is used, or procedures and formats are very limited.	There is more than one assessment format used.	A variety of assessment formats (more than two) are used (e.g., multiple choice, short answer, essay, performance assessment, portfolios, observations, etc.)	**8**
Alignment of Objectives and Assessment	The learning objectives are not aligned with assessment.	Some, but not all, of the learning objectives are aligned and assessed.	Each of the learning objectives is aligned and assessed.	**8**
Assessment Criteria	Assessment contains no clear criteria for measuring student progress.	Assessment criteria have been developed, but they are not clear and/or they include only 1or 2 of the following characteristics: ***Measurable***- All criteria for assessment are described in measurable terms. ***Comprehensive***- Covers essential content and skills from those covered during instruction. Does not assess irrelevant content or skills. ***Criteria Level***- Specifies the minimal level of performance at which students successfully meet the learning objective (demonstrates high yet reasonable expectations).	Assessment criteria are clear and include the following characteristics: ***Measurable***- All criteria for assessment are described in measurable terms. ***Comprehensive***- Covers essential content and skills from those covered during instruction. Does not assess irrelevant content or skills. ***Criteria Level***- Specifies the minimal level of performance at which students successfully meet the learning objective (demonstrates high yet reasonable expectations).	**8**

MAT Rubric for Entry 3, Part 4: Self-Evaluation of the Instructional Unit				
Rating → Indicator ↓	**0 Performance Not Demonstrated**	**1 Performance Partially Demonstrated**	**2 Performance is Demonstrated**	**SLOs**
Effects of Decisions on Student Learning	Teacher provides no evidence or reasons to support conclusions regarding why students did or did not meet learning objectives.	Teacher provides some data or evidence but offers simplistic or superficial reasons or hypotheses to support conclusions regarding why students did or did not meet leaning objectives.	Teacher uses evidence and data to support conclusions. He or she explores multiple hypotheses for why students did or did not meet learning objectives.	**14**
Effects of Decisions on Instruction and Assessment	Teacher provides no rationale for why some activities or assessment were more successful than others.	Teacher identifies successful and unsuccessful activities and assessments but only superficially explores reasons for their success or lack of success.	Teacher identifies successful and unsuccessful activities and assessments and provides plausible reasons for their success or lack of success.	**14**
Communication with Students, Families, and Educational Personnel	Teacher provides no information on communication with students, families, or other educators in support of student learning.	Teacher provides little evidence of communication with students, families, **or** other educators in support of student learning.	Teacher provides evidence of some communication with students, families, **and** other educators in support of student learning.	**11**
Information from School Improvement Process	Teacher provides no information about the School Improvement Process.	Teacher provides evidence of knowledge of the School Improvement Process in the school or a description of his/her role in the School Improvement Process.	Teacher provides evidence of knowledge of the School Improvement Process in the school and a description of his/her role in the School Improvement Process or explains why he/she has no role in the process.	**12**
Implications for Future Teaching of this Unit	Teacher provides no suggestions for redesigning learning goals, instruction, or assessment.	Teacher provides suggestions for redesigning learning goals, instruction, or assessment but offers no rationale for why these changes would improve student learning.	Teacher provides suggestions for redesigning learning goals, instruction, or assessment and explains why these changes would improve student learning.	**12**
Implications for Professional Development/ Continuous Learning	Teacher provides no professional learning goals or goals that are not related to the strengths and weaknesses revealed by teaching this unit	Teacher presents fewer than 2 professional learning goals, or presents goals that are not related to the strengths and weaknesses revealed by teaching this unit	Teacher presents at least two professional learning goals that clearly emerge from the strengths and weaknesses revealed by teaching this unit	**12**

MAT Rubric for Entry 4: Analysis of Classroom Learning Environment				
Rating → Indicator ↓	**0 Performance Not Demonstrated**	**1 Performance Partially Demonstrated**	**2 Performance is Demonstrated**	**SLOs**
Creating an Environment of Respect and Rapport	The teacher did not provide evidence of strategies for establishing an environment of respect and rapport or the strategies were not appropriate for promoting positive verbal and non-verbal communication or positive social interactions.	The teacher only partially described strategies for establishing an environment of respect and rapport, or the strategies were not specific, or not appropriate for promoting both positive verbal and non-verbal communication and positive social interactions.	The teacher fully described appropriate strategies for establishing an environment of respect and rapport to promote both positive verbal and non-verbal communication and positive social interactions.	**13**
Establishing a Culture for Learning	The teacher did not provide evidence of strategies for establishing a culture of learning or the strategies were not appropriate for encouraging active engagement in learning, student responsibility for learning, commitment to the subject, high expectations, and student pride in work,	The teacher only partially described strategies for establishing a culture for learning to encourage some of the following: active engagement in learning, student responsibility for learning, commitment to the subject, high expectations, and student pride in work or the strategies were not appropriate.	The teacher fully described appropriate strategies for establishing a culture for learning to encourage all of the following: active engagement in learning, student responsibility for their own learning, students' commitment to the subject, high expectations for achievement, and student pride in work.	**9**
Encouraging Appropriate Student Behavior	The teacher did not provide evidence of a classroom management plan or the plan did not include standards of conduct, strategies to monitor student behavior, or appropriate and respectful responses to student misbehavior.	The teacher described a classroom management plan that established standards of conduct, strategies to monitor student behavior, and responses to student misbehavior; but the standards were vague, or strategies and responses were not specific, not fully developed or not appropriate and respectful.	The teacher described a classroom management plan that established clear standards of conduct, specific strategies to monitor student behavior, and appropriate and respectful responses to student misbehavior.	**9**
Managing Classroom Procedures	The teacher did not provide evidence of specific classroom procedures or procedures were not established to promote student responsibility, smooth operation of the classroom, or efficient use of time.	The teacher described classroom procedures to promote student responsibility, smooth operation of the classroom, or efficient use of time; but the procedures were not specific, not fully developed, or not appropriate.	The teacher described specific classroom procedures that promote student responsibility, smooth operation of the classroom, and efficient use of time	**3**
Organizing the Physical Environment	The teacher does not provide evidence of a plan to organize the physical space in their classroom or the plan does not promote student access to learning or does not address potential safety concerns.	The teacher described a plan to organize the physical space in their classroom to promote student access to learning, ensure the furniture supports learning activities, and to address potential safety concerns; but the plan was not specific, not fully developed, or not appropriate.	The teacher described a specific plan to ideally organize the physical space in their classroom to optimize student access to learning, ensure the furniture supports learning activities, and to address potential safety concerns.	**3**

MAT Rubric for Entry 5: Formal Observations

The following rubric assess the standards and dispositions related to Entry 5 and the teacher's completion of the requirements for entry 5. The rubric designed to assess all standards and dispositions related to student teaching is included as part of the Professional Progress Form to be included in this entry.

Rating → Indicator ↓	0 Performance Not Demonstrated	1 Performance Partially Demonstrated	2 Performance is Demonstrated	SLOs
Multiple Instructional Strategies to Promote Learning	The teacher does not use a variety of strategies and does not provide evidence of student learning.	The teacher uses a few strategies but does not provide evidence linking these strategies to student learning, or does not maintain high expectations, or does not persist in helping all students achieve success.	The teacher consistently uses a variety of appropriate strategies, links these strategies to student learning, maintains high expectations, and persists in helping all students achieve success.	**10**
Effective Verbal and Non-Verbal Communication	No evidence is provided that effective verbal and non-verbal communication among students was taken into account.	The teacher provides some evidence of the importance of positive communication but does not provide opportunities for students to practice communication techniques.	The teacher encourages verbal and non-verbal communication and provides evidence of specific learning activities leading to the development of positive communication.	**11**
Fosters Active Inquiry	The teacher does not actively engage students or encourage active inquiry.	The teacher understands the importance of active engagement and inquiry techniques but does not develop learning activities that build on inquiry learning.	The teacher actively engages students in inquiry learning activities. Specific examples of inquiry learning are provided.	**3**
Supportive Classroom Interactions	The teacher does not encourage student interaction in learning activities.	The teacher promotes positive interactions among students but does not provide specific learning activities that encourage interactions.	The teacher promotes positive interactions among students and provides specific learning activities that encourage positive interactions.	**13**

MAT Rubric for Entry 6: Professional Logs

Rating → Indicator ↓	0 Performance Not Demonstrated	1 Performance Partially Demonstrated	2 Performance is Demonstrated	SLOs
Professional Log Reflections	Teacher does not identify professional strengths and weaknesses revealed by keeping professional logs or does not describe any professional learning goals or professional plans based on these goals.	Teacher may describe some professional strengths and weaknesses revealed by keeping professional logs or identify goal and plans related to the professional logs; but does not describe all three components on all three logs.	Teacher describes strengths and weaknesses revealed by keeping professional logs, identifies one or more professional learning goals on each of the three professional logs, and describes specific plans to meet these goals.	**12**
Communication with Families, Community, and Educational Personnel	Teacher provides no evidence of interactions with families, community, or other educators in support of student learning.	Teacher provides little evidence of interactions with families, community, or other educators in support of student learning.	Teacher provides evidence of frequent interactions with families, community, and other educators in support of student learning.	**11**
Participation in the School Improvement Process	Teacher provides no evidence of participation in or contributions to school or district improvement efforts.	Teacher provides little evidence of participation in and/or contributions to school and/or district improvement efforts.	Teacher provides evidence of frequent participation in and contributions to school and/or district improvement efforts.	**12**

MAT Teaching Portfolio ORAL PERFORMANCE					
KNOWLEDGE	**1 Unsatisfactory**	**2 Basic**	**3 Proficient**	**4 Distinguished**	**SLOs**
a. Curriculum Demonstrates knowledge of the origins, development, and contemporary significance of issues, models, and practices in curriculum theory and practice.	Reflects **minimal** knowledge of curriculum theory and practice.	Reflects **basic** knowledge of curriculum theory and practice.	Reflects **thorough** knowledge of curriculum theory and practice	Reflects an **optimal** knowledge of curriculum theory and practice.	**1**
b. Research and Scholarship Demonstrates practical knowledge of education research including its methodologies, interpretations, and potential classroom applications.	Reflects **minimal** knowledge of education research such as its methodologies, interpretations, or potential classroom applications.	Reflects **basic** knowledge of education research such as its methodologies, interpretations, or potential classroom applications.	Reflects **thorough** knowledge of education research such as its methodologies, interpretations, or potential classroom applications.	Reflects an **optimal** knowledge of education research such as its methodologies, interpretations, or potential classroom applications.	**14**
c. Pedagogical Content Knowledge* Demonstrates sound pedagogical content knowledge in the subject areas the candidate will teach.	Reflects **minimal** pedagogical content knowledge.	Reflects **basic** pedagogical content knowledge.	Reflects **thorough** pedagogical content knowledge.	Reflects **optimal** pedagogical content knowledge.	**5**

MAT Teaching Portfolio ORAL PERFORMANCE					
SKILLS	**1 Unsatisfactory**	**2 Basic**	**3 Proficient**	**4 Distinguished**	**SLOs**
a. Teaching and Learning Demonstrates the ability to use research-based skills and strategies that positively impact student learning and classroom environment.	Shares **minimal** examples of research-based teaching skills and strategies that positively impact student learning.	Shares **general** examples of research-based teaching skills and strategies that positively impact student learning.	Shares **specific** examples of research-based teaching skills and strategies that positively impact student learning.	Shares **optimal** examples of research-based teaching skills and strategies that positively impact student learning.	**4**
b. Teaching Judgment and Reasoning Demonstrates the ability to accurately interpret, analyze, and evaluate issues of curriculum, instruction, assessment, and classroom management before, during, and after teaching.	Provides **minimal** examples of teacher judgment and reasoning such as the ability to interpret, analyze, or evaluate issues of curriculum, instruction, or assessment.	Provides **general** examples of teacher judgment and reasoning such as the ability to interpret, analyze, or evaluate issues of curriculum, instruction, or assessment.	Provides **specific** examples of teacher judgment and reasoning such as the ability to interpret, analyze, or evaluate issues of curriculum, instruction, or assessment.	Provides **optimal** examples of teacher judgment and reasoning such as the ability to interpret, analyze, or evaluate issues of curriculum, instruction, or assessment.	**8**
c. Communication Demonstrate effective use of a variety of communication skills and modalities.	Demonstrates **minimal** communication skills through oral, written, and visual communication.	Demonstrates **basic** communication skills through oral, written, and visual communication.	Demonstrates **strong** communication skills through oral, written, and visual communication.	Demonstrates **optimal** communication skills through oral, written, and visual communication.	**11**
d. Diversity Demonstrate awareness, understanding, and skills necessary to adapt instructions based on diversity of learners.	Demonstrates **minimal** ability to adapt instruction to the diversity of learners.	Demonstrates **basic** ability to adapt instruction to the diversity of learners.	Demonstrates **strong** ability to adapt instruction to the diversity of learners.	Demonstrates **optimal** ability to adapt instruction the diversity of learners.	**4**
e. Technology Demonstrate the ability to use technology to promote student learning.	Provides **minimal** examples of use of technology to impact student learning.	Provides **basic** examples of use of technology to impact student learning.	Provides **meaningful** examples of use of technology to impact student learning.	Provides **optimal** examples of use of technology to impact student learning.	**2**

MAT Teaching Portfolio ORAL PERFORMANCE					
PROFESSIONALISM	**1 Unsatisfactory**	**2 Basic**	**3 Proficient**	**4 Distinguished**	**SLOs**
a. Personal and Professional Development Demonstrate a commitment to continued learning, growth, and scholarly activity.	Reveals **minimal** plan for continued professional development beyond the M.A.T. degree.	Reveals **basic** plan for continued professional development beyond the M.A.T. degree	Reveals **specific** plan for continued professional development beyond the M.A.T. degree.	Reveals **optimal** plan for continued professional development beyond the M.A.T. degree.	**12**
b. Collaboration, Leadership, and Service Demonstrate a commitment to work collaboratively with others in their professional role, provide leadership in interactions with peers, and contribute to the profession.	Provides **minimal** examples of professional collaboration, leadership, or contribute to the profession.	Provides **basic** examples of professional collaboration, leadership, or contribute to the profession.	Provides **specific** examples of professional collaboration, leadership, or contribute to the profession.	Provides **optimal** examples of professional collaboration, leadership, or contribute to the profession.	**13**
c. Ethical and Caring Behavior Recognize and address moral and ethical responsibilities within their profession and practice professional ethics.	Indicates **minimal** concern or interest in moral and ethical responsibilities within the profession.	Indicates **basic** concern or interest in moral and ethical responsibilities within the profession.	Indicates **specific** concern or interest in moral and ethical responsibilities of the profession.	Indicates an **optimal** concern and interest in moral and ethical responsibilities of the profession.	**13**

(c) What are the Institution's Plans Regarding Program Accreditation?

The North Central Association of Colleges and Schools (NCA) accredits Kansas State University. The Professional Education Unit at Kansas State University is accredited by the National Council for Accreditation of Teacher Education (NCATE) and the Kansas State Department of Education (KSDE).

The professional education unit is preparing for KSDE accreditation review (Spring 2015) and NCATE accreditation review (Fall 2015). The M.A.T. program has been designed to ensure that it meets the standards and requirements of both accreditation bodies. Once approved by KBOR and Kansas State University, the M.A.T. will be included in the professional education unit's annual Title II report that is due annually on April 1. The M.A.T. will be subject to full review in 2021.

School of Applied Science and Technology (Olathe) – Professional Science Master in Applied Science and Technology (Approved by Grad Council on 11-3-15)

New Degree Request – Kansas State University

Criteria	Program Summary
1. Program Identification	Professional Science Master in Applied Science and Technology CIP Code: 30.00 Multi-/Interdisciplinary Studies
2. Academic Unit	School of Applied and Interdisciplinary Studies
3. Program Description	The Professional Science Master in Applied Science and Technology is designed for K-State Olathe to be compliant with the Johnson County Education Research Triangle (JCERT) mandate for the campus to provide graduate programming in food, animal health and related sectors, consistent with regional demand, K-State 2025 Visionary Plan, and the Kansas Board of Regents guidelines. It is intended to be a Professional Science Master's (PSM) degree, a unique professional interdisciplinary program that prepares students for direct entry into a variety of science-related career options in industry, business, government, and non profit organizations, progressing to leadership roles. Founded by Alfred P. Sloan Foundation in 1997, the PSM produces graduates highly valued by employers by combining advanced, graduate coursework in science with an appropriate component of professional skills development and by including an experiential learning component appropriate to the targeted employment sector. The program will be funded by K-State Olathe funds.
4. Demand/Need for the Program	The need for this program has been documented through multiple market demand studies over the past 5 years, conducted by both K-State experts and independent consultants. Market demand information was quantified through surveys of more than 100 employers across 6 economic sectors in the Kansas City area. Additionally, K-State Olathe faculty and staff have collected qualitative input through focused discussions with regional employers and employees over the last 3 years and strategic planning sessions with the K-State Olathe advisory board over the last 2 years. The results show strong interest in a Professional Science Master's (PSM) program being offered at the K-State Olathe campus. Based on estimates provided by firms primarily located in Johnson County, KS and representing 59,567 employees (20% of the workforce in Johnson County, KS), there may be more than 200 working professionals who would be interested in pursuing a PSM each year.
5. Comparative /Locational Advantage	There are other STEM programs provided in the area; however, according to the Brooking Institute 2014 report on "Greater Kansas City", those programs are inadequate to keep up with the demand. No program exists in the region or at other Regents universities similar to K-State Olathe's proposed Professional Science Master in Applied Science and Technology degree with its primary foci on food, animal health and related sectors.

6. Curriculum	Program graduation requirements are consistent with those of a Professional Science Master's (PSM) degree, which is designed to allow students to pursue advanced training and excel in STEM fields while simultaneously developing highly-valued professional skills. Students will be required to complete a minimum of 30 credit hours, which is consistent with K-State's norm. The PSM curricula elements include: • At least 50% of the course content in the natural sciences, technology, engineering, mathematics and/or computational sciences • A professional skills component • An experiential component that integrates the practical application of scientific and professional knowledge, behavior, and skills
7. Faculty Profile	Initial program faculty support is to be provided by K-State faculty from the Olathe, Manhattan and Salina campuses. The program also has the benefit of industry/expert practitioners in the form of a 12-member External Advisory Board for the program. There will be new faculty hires to accommodate program growth, as appropriate, through the School for Applied and Interdisciplinary Studies. Involvement of various academic units across K-State will enable a breadth of interdisciplinary course offerings. All the 12 core faculty members are tenured or tenure track instructional faculty who are members of the departments identified as the voting units for the proposal. Voting units identified are: Department of Animal Sciences and Industry, Department of Diagnostic Medicine/Pathobiology, Department of Horticulture, Forestry and Recreation Resources, and K-State Olathe/School of Applied and Interdisciplinary Studies. All courses that form part of the PSM degree are also part of the faculty members' in load teaching requirements.

8. Student Profile	The program will be geared to the working professional who already has an undergraduate degree, or the equivalent, in a related field, and who is seeking advancement to a management/leadership position. Standards required by the Kansas State University Graduate School will be used for any student who seeks admission. Admissions requirements include evidence of completion of a bachelor's degree from an accredited university (or the equivalent) with a grade point average above 3.0 on a 4.0 scale, excellent references from three people knowledgeable of the applicant's professional qualifications, and a statement of objectives that demonstrates that the program is an appropriate match with the applicant's aspirations. Admission is not contingent upon having a specific type of undergraduate degree; however, students without a qualifying STEM degree may be required to take prerequisites courses.
9. Academic Support	Academic support services for the program will be provided by staff located at K-State Olathe for prospective student inquiries, admissions advising and other support as already available for the 8 graduate degree programs currently offered for students at the K-State Olathe campus. No new staff will be required. Dr. Janice Barrow, the Associate Dean for Academic Affairs and Executive Education, will serve as Program Director and assist students to enable successful completion of the program. Students will have the benefit of other full time staff such as Program Manager, Director of Student Services, Program Assistant for Student Services, and academic advisors. The K-State Graduate School and Libraries, as well as faculty and staff from 6 colleges and 9 departments, already provide support to the K-State Olathe campus through various modalities.
10. Facilities and Equipment	K-State Olathe has a 110,000 sq. ft., state-of-the-art facility sitting on 38 acres in the Kansas Bioscience Park. The building was designed specifically for graduate-level programming and research. It has various interactive classroom spaces, modular research laboratories, and public/meeting spaces. -There are six classrooms devoted to instruction and additional rooms that can be used when needed, including a forum hall, four conference rooms, and two multi-purpose rooms. The classrooms are equipped to fully enable face-to-face instruction and mediated instruction. -There are ten 750 sq. ft. research labs, including a fully functioning Biological Safety Level-II (BSL-II) food safety laboratory, BSL-II teaching laboratory, postharvest physiology laboratory, biological and agricultural engineering laboratory, and veterinary diagnostic laboratory. - There are also three fully equipped state-of-the-art kitchens that can be used for instruction: Teaching Kitchen, R&D Kitchen, and Presentation Kitchen.

11. Program Review, Assessment, Accreditation	All program student learning outcomes will be assessed using both direct and indirect methods, in accordance with Higher Learner Commission standards. There is no accrediting agency specific to this academic focus area; however, PSM Affiliation requires and prescribes very stringent sets of assessments that must be reported to the organization. The data is compiled and published as part of the continuous improvement process. The student learning outcomes to be assessed: Upon successful completion of the Professional Science Master in Applied Science and Technology, the students will be able to: 1. Demonstrate advanced knowledge of one or more relevant STEM fields. 2. Demonstrate graduate level oral and written communication skills in a professional STEM environment. 3. At an advanced level, effectively analyze quantitative data for use across multiple science disciplines. 4. Synthesize multiple disciplines in order to accurately identify problems. 5. Synthesize multiple disciplines in order to develop innovative solutions.
12. Costs, Financing	Instruction will be provided by existing full-time K-State faculty who are already fully supported by the University with the potential to add qualified faculty and instructors if the demand warrants. All expenses are expected to be covered by: 1) utilizing unused capacity in existing courses, 2) revenue from tuition, and 3) JCERT funds. No additional resources will be required.

KANSAS STATE UNIVERSITY | Olathe

Proposal
Professional Science Master in Applied Science and Technology

Basic Program Information

Proposing Institution:	Kansas State University
Title of Proposed Program:	Professional Science Master in Applied Science and Technology
Degree to be offered:	Professional Science Master in Applied Science and Technology
Anticipated Start Date:	Fall 2016
Responsible Academic Unit:	School of Applied and Interdisciplinary Studies
Program Identification:	CIP Code: 30.00 Multi-/Interdisciplinary Studies
External Assessment:	PSM Affiliation, Professional Science Master's National Office

1. Program Need and Student Characteristics[1]

The Professional Science Master in Applied Science and Technology is designed to help K-State Olathe achieve the Johnson County Education Research Triangle (JCERT) mandate for the campus to provide graduate programming in food, animal health and related sectors, consistent with regional demand, K-State 2025 Visionary Plan, and the Kansas Board of Regents guidelines. A Professional Science Master's (PSM) degree is a unique professional interdisciplinary program designed to prepare students for direct entry into a variety of science-related career options in industry, business, government, and non-profit organizations, and to help them progress into leadership roles. Founded by the Alfred P. Sloan Foundation in 1997, the PSM-model programs produce graduates highly valued by employers by combining advanced, graduate coursework in science with an appropriate component of professional skills development, and by including an experiential learning component applicable to the targeted employment sector. The program will be supported with K-State Olathe funds. **There is no need for new faculty, funding, staff or equipment.**

1.1 Alignment of Program with Kansas State University's 2025 Visionary Plan

The PSM, as envisaged, will be offered through the School of Applied and Interdisciplinary Studies at K-State Olathe Campus and is consistent with the goals for K-State's 2025 themes 1, 3, 4, 5 and 6, which are to:

- Create a culture of excellence that results in scholarly and creative activities, and discovery in a

[1] Sources:
1) Needs Assessment for Educational Programming, K-State Olathe Innovation Campus, Market demand report prepared by Beth Tatarko, Vice President, The Austin Peters Group, Inc., Overland Park, KS (March, 2010)
2) Educational and Professional Development Needs in the Animal Health Corridor, Market demand survey report by Dr. Vincent Amanor-Boadu, Associate Professor of Agribusiness Economics and Management, and K. Renee Stoneman, Graduate Student of Agribusiness Economics, Kansas State University. (Dec, 2010)
3) Kansas City Region Industry Interviews and Recommendations Report, K-State Olathe Advisory Board, 2012-2014
4) Prosperity at a Crossroads: Targeting Drivers of Economic Growth in Greater Kansas City, Report published by Mid-America Regional Council and the Brookings (Institute) Metropolitan Policy Program (June, 2014)
5) Lynch, Carol, "The Case for Professional Science Master's Degrees", BioScience Vol. 62 No. 8, August 2012
6) Resolution of the Johnson County Education Research Triangle Authority Board Of Directors

variety of disciplines and endeavors that benefit society as a whole.
- Advance a culture of excellence that attracts highly talented, diverse graduate students.
- Be a national leader and model for integrating research, education, and engagement.
- Foster a work environment that encourages creativity, excellence, and high morale in faculty and staff, responds to changing needs, embraces diversity, values communication and collaboration, and is respectful, trusting, fair, and collegial for all.
- Provide facilities and infrastructure that meet our evolving needs at a competitive level with our benchmark institutions and are an asset to recruit and retain quality students, faculty, researchers, and staff.

All degrees offered through K-State Olathe are subject to the same policies, procedures and standards of excellence applied across the University. The unique advantage of programs offered at K-State Olathe is that, given their interdisciplinary focus, JCERT financial support, and close proximity to the Greater Kansas City area, they are well poised to foster exceptional, collaborative, and transformative opportunities for students and faculty at all K-State campuses, alumni and other stakeholders.

1.2 Student Demand

The need for this program has been documented through multiple market demand studies, over the past five years, conducted by both K-State experts and independent consultants. Based on estimates provided by firms primarily located in Johnson County, KS and representing 59,567 employees (20% of the workforce in Johnson County, KS), there may be more than 200 working professionals who would be interested in pursuing a PSM each year. Summary results provided by the 2010 Austin Peters Group, Inc. report, include the following: 42% (22 out of 42) of the firms reported their employees would be interested in a Professional Science Master's program, and approximately 207 employees annually were expected to participate in such a program.

The market demand information in the Austin Peters Group, Inc. report was quantified through surveys of more than 100 employers across six economic sectors in the Kansas City area. Additionally, K-State Olathe faculty and staff have collected qualitative input through focused discussions with regional employers and employees over the last three years and through strategic planning sessions with the K-State Olathe advisory board over the last two years. The results show strong interest in a Professional Science Master's program being offered at the K-State Olathe campus.

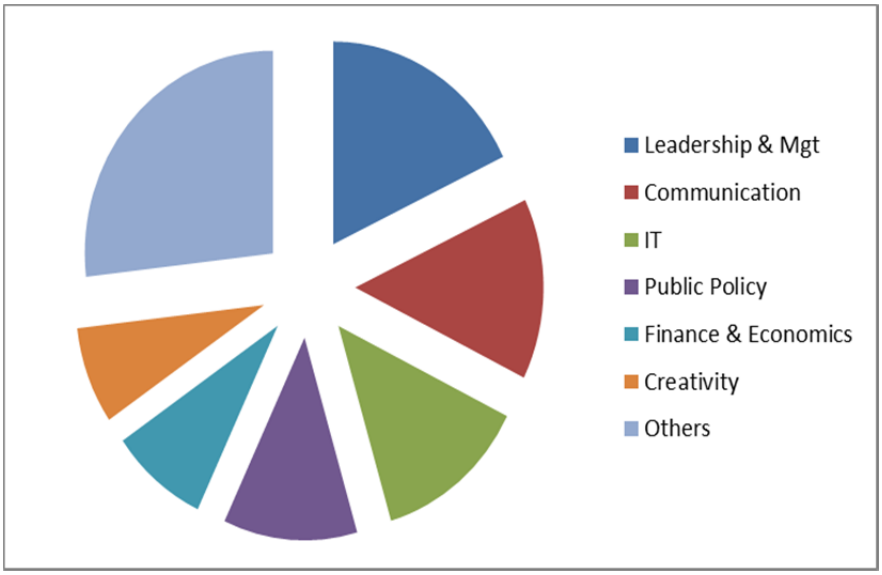
1.3 Demand for Graduates

The Brooking's Institute 2014 report (4) states that *"Greater Kansas City has a skilled workforce, but is not educating and retaining enough workers to meet future demand."* It also notes *"The region has not produced enough highly educated or STEM-qualified workers to keep pace with employers' demand, and its ability to attract talent from elsewhere has diminished."*

According to the findings compiled by the Austin Peters Group, Inc. in coordination with the Kansas Department of Labor and the Missouri Department of Labor, occupational areas where a PSM would be highly valued are projected to grow, and "The Professional Science field shows the highest projected job growth on a percentage basis…" Firms in Johnson County identified the PSM, Executive MBA and Applied Statistics as those degrees showing the highest viability.

In addition to the STEM focus, the PSM has a professional skills component. The above-referenced "Needs Assessment for Educational Programming, K-State Olathe Innovation Campus, Market Demand Report" showed a high demand from the Johnson County firms representing 59,567 employees, for specific

professional skills for STEM professionals that will form part of the PSM degree program. Professional STEM skills demanded are summarized as follows:



Source: Educational and Professional Development Needs in the Animal Health Corridor Vincent Amanor-Boadu and K. Renee Stoneman, K-State, 2010

The need for interdisciplinary professional skills for STEM professionals was reaffirmed on: (1) March 26, 2015 at the joint meetings of the K-State Olathe Innovation Campus, Inc. Board of Directors, the Johnson County Education Research Triangle (JCERT) Authority, and the K-State Olathe Innovation Campus Advisory Board; (2) March 3, 2015 by the K-State Urban Water Institute roundtable meeting's industry participants; and (3) June 4, 2015 at the KCNext Summer 2015 Workforce Summit by employer participants.

1.4 Locational and Comparative Advantages

While there are other STEM programs provided in the area, no program exists in the region or at other Regents universities similar to K-State Olathe's proposed PSM. Regionally there are only six other PSM programs on record, but with non-competing foci. The other programs are:

In Kansas:	Fort Hays State U.	Biological Sciences
	University of Kansas	Environmental Assessment
In Missouri:	Missouri State University	Natural & Applied Science (non-overlapping science areas)
	Missouri Western State U.	Chemistry
	Missouri Western State U.	Human Factors & Usability Test
	Truman State University	Bioscience Informatics

Internally, the College of Technology and Aviation, K-State Salina campus, offers a Professional Master of Technology degree, with the following non-competing areas of concentration:

Aircraft Certification
Airport Management
Electronic Engineering Technology
Mechanical Engineering Technology
Unmanned Aircraft Systems Cybersecurity
Unmanned Aircraft Systems Management

Animal health and food safety are major industries in Kansas—and in the world. They are also primary foci of Kansas State University, a long-time leader in these fields of research. The K-State Olathe campus has been funded by the citizens of Johnson County consistent with the State of Kansas, Senate Bill No. 115, New Section 5, which says, in part, that those revenues raised for K-State are to be used for:

> *"…the research and educational programs in animal health and food safety and security at the Johnson county location of Kansas State University…"*

The related Johnson County Education Research Triangle (JCERT) authority tax Resolution states that K-State Olathe's use of the funds is to be for:

> *"…instruction in support of certificate programs, graduate programs, graduate degrees, continuing education, and professional services related to focus areas."*

The proposed PSM degree based at K-State Olathe in Johnson County encapsulates the intent of the Kansas Senate Bill 115 and the related JCERT authority tax Resolution and furthers the animal health and food safety foci of Kansas State University, consistent with its mission. The PSM students will be able to take STEM courses currently offered at the Olathe campus related to the following STEM programs:

M.S. in Food Science
M.S. in Horticulture with an emphasis in Urban Food Systems
M.S. in Veterinary Biomedical Science

1.5 Student Characteristics

Unlike the other degrees being offered at Olathe, which are research based, the PSM degree is application based and geared to the working professional who is seeking advancement to a management/leadership position.

Students pursuing the PSM must be admitted to K-State's Graduate School. Standards for admission include evidence of completion of a bachelor's degree from an accredited university (or the equivalent) with a grade point average above 3.0 on a 4.0 scale, excellent references from three people knowledgeable of the applicant's professional qualifications, and a statement of objectives that demonstrates that the program is an appropriate match with the applicant's aspirations. Admission is not contingent upon having a specific type of undergraduate degree; however, students without a qualifying STEM degree may be required to take pre-requisite courses. All international students admitted must hold a degree from an established institution comparable to a U.S. college or university, have an outstanding undergraduate record, have the demonstrated ability to do graduate work, and provide evidence of English language skills sufficient for the successful completion of a graduate degree.

The Graduate School requires each international applicant whose native language is not English to demonstrate competence in the English language by achieving a satisfactory score on the Test of English as a Foreign Language (TOEFL), the International English Language Testing System (IELTS) or Pearson Test of English (PTE). The TOEFL, IELTS or PTE is required to ensure that the student's progress toward a degree is not jeopardized by language barriers. The TOEFL (K-State TOEFL school code 6334) is offered several times a year throughout the world by the Educational Testing Service, Princeton, New Jersey. International applicants are advised to take the TOEFL as early as possible to avoid delays in the processing of their applications for admission. An applicant who has received a degree in the last two years from a United States college or university is exempt from this requirement. However, individual programs may require demonstration of English language proficiency.

The students are expected to share the characteristics of other PSM students characterized as wanting to work in: non-academic sectors; interdisciplinary and team oriented environments; managerial or other professional level positions, and emerging areas of science and scientific discovery. They are also characterized as seeking career growth and advancement in government, industry and technology; seeking competitive edge in the job market; and are re-entering the workforce by refining professional and technical skills.

The Austin Peters Group, Inc. report identified the following pool of students in Johnson County, by job characteristics: teachers from chemistry, physics, biology, pharmacy, math, laboratory and medical technicians, chemists, biologists, geologists, environmentalists, engineers (mechanical, software, electrical, civil, traffic), accountants, information technology professionals, programmers including information technology programmers, analysts, mathematicians, compliance, quality control, licensure, sales, operations, business services, research and development, marketing and project managers, project coordinators, team leaders, and assistant managers.

Students will have multiple opportunities to interact with each other via various modalities; to interact with students from a variety of disciplines and professions; and to interact with experienced professionals and mentors from industry and academia.

2. Curriculum

The curriculum was developed and reviewed by interdisciplinary faculty based at Olathe with input from: deans and department heads of multiple disciplines across K-State; industry representatives; individuals at the PSM organization's Keck Institute; and the K-State Olathe Advisory Board, twelve of whom have agreed to serve as members of the "Active External Advisory Board" for the degree. An active external advisory board is required by the Professional Science Master's organization. The letter of support, signed by all 12 members of the external advisory board, has been included as part of the appendix. Also included in the appendix is the favorable review letter from the PSM organization.

Students will be required to complete a minimum of 30 credit hours, and the program graduation requirements are consistent with the PSM guidelines. If students take 15 credits each academic year, they can reasonably finish the program within two years. Continuous progress is expected, so that if a student does not take classes for two years, s/he will be put on inactive status and must reapply to the program. Courses applied to the program of study may not be more than six years old when the program is completed.

Upon successful completion of the Professional Science Master in Applied Science and Technology, the students will be able to:

1. Demonstrate advanced knowledge of one or more relevant STEM fields.
2. Demonstrate graduate level oral and written communication skills in a professional STEM environment.
3. At an advanced level, effectively analyze quantitative data for use across multiple science disciplines.
4. Synthesize information from multiple disciplines in order to accurately identify problems.
5. Synthesize information from multiple disciplines in order to develop innovative solutions.

The range of courses and disciplines included in the PSM not only reflects market needs, but, as documented by both University of Kansas and The Open University*, provides other benefits such as:

1. Students are more highly motivated when they get to choose topics that are interesting to them. As a result the learning becomes meaningful, purposeful and deeper resulting in learning experiences that stay with the student for a lifetime.
2. Exploring topics across a range of subject boundaries motivates students to pursue new knowledge in different subject areas.
3. Critical thinking skills are used and developed as students look across disciplinary boundaries to consider other viewpoints.
4. Transferable skills of critical thinking, synthesis and research are developed and are applicable to future learning experiences.
5. Interdisciplinary knowledge and application of different disciplines can lead to greater creativity.

*Sources:

1) Buss, J, "Why Interdisciplinary Graduate Program Attract Great Students", Research Mission of Public Universities, University of Kansas, http://dept.ku.edu/~merrill/PDFfiles/buss.pdf, (Retrieved August 2015)
2) The Open University, http://www.open.edu/openlearn/education/what-are-the-benefits-interdisciplinary-study , (Retrieved August 2015)

Credit Requirement Summary

Credits	Category	PSM Curriculum Requirements
15 credits	STEM Courses	At least 50% of the course content in the natural sciences, technology, engineering, mathematics and/or computational sciences
12 credits	Professional Skills Courses	At least a 20% professional skills component developed in consultation with leaders from industry, business, government, or non-profit organizations
3 credits	Capstone Experience Courses	An experiential component that includes at least one capstone project. The student participates in an applied learning setting under the supervision of a third-party entity, and the university maintains responsibility for the educational component, including setting educational goals parameters, evaluations, and grading, relating to the courses. These courses are designed to emphasize practical application of scientific and professional knowledge, behavior, and skills
30 credits	Total	Credits consistent with K-State's norm for master-level programs.

Program outline:

STEM Courses (15 credits required) ***(Must be 50% or more of total coursework)***

3 credits selected from the following courses (or another graduate statistics course as approved by the student's supervisory committee):

STAT 701 Fundamental Methods of Biostatistics (3 credits)

STAT 703 Introduction to Statistical Methods for the Sciences (3 credits)
STAT 705 Regression and Analysis of Variance (3 credits)

12 credits selected from the following courses (or graduate STEM courses as approved by the student's supervisory committee):

ASI 671 Meat Selection and Utilization (2 credits)
ASI 675 Monogastric Nutrition (1 credit)
ASI 678 Equine Nutrition (1 credit)
ASI 776 Meat Industry Technology (3 credits)
BAE 815 Graduate Seminar in Agricultural Engineering (1 credit)
BAE 820 Topics in Agricultural Engineering (1-18 credits)
DMP 710 Introduction to One Health (2 credits)
DMP 754 Introduction to Epidemiology (3 credits)
DMP 802 Environmental Health (3 credits)
DMP 844 Global Health Issues (3 credits)
DMP 870 Pathobiology Seminar MS (1 credit)
DMP 880 Problems in Pathobiology MS (1-6 credits)
DMP 888 Globalization, Cooperation, & the Food Trade (1 credit)
DMP 895 Topics in Pathobiology MS (0-18 credits)
FDSCI 600 Food Microbiology (2 credits)
FDSCI 601 Food Microbiology Lab (2 credits)
FDSCI 630 Food Science Problems (0-18 credits)
FDSCI 690 Principles of HACCP (2 credits)
FDSCI 695 Quality Assurance of Food Products (3 credits)
FDSCI 961 Graduate Problem in Food Science (1-18 credits)
HN 841 Consumer Research - Fundamentals (1 credit)
HN 843 Consumer Research - Qualitative (1 credit)
HN 848 Consumer Research - Quantitative (1 credit)
HORT 725 Postharvest Technology and Physiology of Horticultural Crops (3 credits)
HORT 780 Health-Promoting Phytochemicals and Physiology of Fruits and Vegetables (2 credits)
HORT 790 Sustainable Agriculture (2 credits)
HORT 791 Urban Agriculture (2 credits)
HORT 793 Farm to Fork Produce Safety (2 credits)
HORT 794 Urban Food Systems (2 credits)
HORT 795 Urban Agriculture Study Tour (1 credit)

Students may also choose from the following
AAI 795 Topics in Applied and Interdisciplinary Studies (1-3 credits)
AAI 880 Problems in Applied and Interdisciplinary Studies (1-6 credits)
AAI 895 Advanced Topics in Applied and Interdisciplinary Studies (1-6 credits)
AAI 899 Research in Applied and Interdisciplinary Studies (1-6 credits)

PROFESSIONAL SKILLS (12 credits required) ***(Must be 20% or more of total coursework)***

3 credits required:

AAI 801 Interdisciplinary Process (3 credits)

9 credits selected from the following courses (or other graduate professional skills courses as approved by the student's supervisory committee):

AAI 840	Regulatory Aspects of Drug and Vaccine Development in Animal Health (2 credits)
COT 703	Project Management for Professionals (3 credits)
COT 704	Managerial Finances, Metrics, and Analytics (3 credits)
COT 706	Informatics and Technology Management (3 credits)
DMP 815	Multidisciplinary Thought and Presentation (3 credits)
DMP 816	Trade & Agricultural Health (2 credits)
DMP 888	Globalization, Cooperation, and Food Trade (1 credit)
EDACE 832	Interpersonal and Intrapersonal Communications (3 credits)
EDACE 834	Leading Adults in a Globalized and Diverse World (3 credits)
EDACE 835	Developing Teams and Leaders (3 credits)
EDACE 836	Group Dynamics (3 credits)
EDACE 886	Seminars in Adult Education (1-6 credits)

Students may also choose from the following:

AAI 795	Topics in Applied and Interdisciplinary Studies (1-3 credits)
AAI 870	Seminar in Applied and Interdisciplinary Studies (1-6 credits)
AAI 880	Advanced Problems in Applied and Interdisciplinary Studies (1-6 credits)
AAI 895	Advanced Topics in Applied and Interdisciplinary Studies (1-6 credits)
AAI 899	Research in Applied and Interdisciplinary Studies (1-6 credits)

CAPSTONE/Experiential Component (3 credits)

3 credits required:

AAI 858	Capstone Experience I (1 credits)
AAI 859	Capstone Experience II (2 credits)

Course Descriptions:

The courses with AAI prefixes are new courses developed by the School for Applied and Interdisciplinary Studies, K-State Olathe.

AAI 795. Topics in Applied and Interdisciplinary Studies (1-3 credits)
Selected topics in applied and interdisciplinary studies.

AAI 801. Interdisciplinary Process (3 credits)
The overall goal of this course is for students to develop an understanding of and practice in design thinking as both a framework that allows interdisciplinary and cross-function teams to work together and as a process to generate imaginative and creative solutions to complex challenges and problems.

AAI 840. Regulatory Aspects of Drug and Vaccine Development in the Animal Health Industry (2 credits)
This course explores the topic of regulations associated with animal health product development and manufacturing. Topics for discussion will include an overview of the regulatory affairs process in the U.S. and other countries, drug and vaccine classifications and the approval process, GCP/GLP guidelines, drug and vaccine efficacy and safety testing, human and environmental safety issues, and future challenges and current industry needs.

AAI 858. Capstone Experience I (1 credit)
This course provides students the opportunity to synthesize and integrate knowledge in its application to professional practice. It is designed for students who intend to work in an applied professional setting where they are expected to critically apply existing knowledge and methods to solve problems. Students will complete a project on a topic of interest, in consultation with the instructor.

AAI 859. Capstone Experience II (2 credits)
This course provides students the opportunity to synthesize and integrate knowledge in its application to professional practice. It is designed for students who intend to work in an applied professional setting where they are expected to critically apply existing knowledge and methods to solve problems. Students will produce written reports and oral presentations on their project of focus.

AAI 870. Seminar in Applied and Interdisciplinary Studies (1-6 credits)
Student presentations and discussion of current topics and recent findings in applied and interdisciplinary studies.

AAI 880. Problems in Applied and Interdisciplinary Studies (1-6 credits)
Opportunity for advanced independent study of a specific problem or technique in applied and interdisciplinary studies. Topics selected jointly by student and instructor.

AAI 895. Advanced Topics in Applied and Interdisciplinary Studies (1-6 credits)
Focus on advanced topics in applied and interdisciplinary studies.

AAI 899. Research in Applied and Interdisciplinary Studies (1-6 credits)
Research with a focus on applied science and interdisciplinary studies.

ASI 671 - Meat Selection and Utilization (2 credits)
Emphasis on meat cut identification, muscle and bone anatomy, grades, fabricated meat, institutional cuts, specification writing, processing, meat preparation and shrinkage costs.

ASI 675 - Monogastric Nutrition (1 credit)
An overview of the nutritional principles involved with feeding nonruminants. Topics will include digestive anatomy and the metabolism of carbohydrates, lipids, amino acids, vitamins, and minerals.

ASI 678 - Equine Nutrition (1 credit)
Equine digestive anatomy and physiology. Nutrient requirements of the equine as they relate to growth, work, reproduction and lactation, as well as the relationship of nutrition to disease and environment. Practical management considerations and current equine nutrition research will be reviewed.

ASI 776 - Meat Industry Technology (3 credits)
Apply concepts and information about meat composition, product safety and spoilage, quality; formulation, processing and evaluation of cured, precooked, and sausage; packaging, troubleshooting, and plant organization. This is a web-based lecture class intended for distance education students.

BAE 815. Graduate Seminar in Agricultural Engineering (1 credit)
Presentation and discussion of research philosophies, procedures, and results.

BAE 820. Topics in Agricultural Engineering (1-18 credits)
A course reserved for study of current topics in agricultural engineering. Topics announced when offered.

COT 703. Project Management for Professionals (3 credits)

This course focuses on applied project management methodology, tools, and techniques. Topics include career aspects of project management; business factors affecting the project; project organization, planning, execution, and communications; the project life cycle; risk analysis; and best practices in project management.

COT 704. Managerial Finances, Metrics, and Analytics (3 credits)
Provides an overview of an organization's financial statements, with an emphasis on the interaction between people in management positions and those statements, as well as an examination of the business investment decision-making process. Explores the use of metrics and analytics to measure and improve managerial performance.

COT 706. Informatics and Technology Management (3 credits)
Provides theoretical and practical experience in using information technology to support organizational decision-making processes. Provides tools in areas such as statistics, research methods, data mining, and information technology to develop solutions tailored to business problems.

DMP 710. Introduction to One Health (2 credits)
One Health encompasses the complex interrelationships among humans, animals, and the environment. This online course provides a broad introduction to One Health, incorporating original videos of leading experts, case studies, and scientific readings. It addresses zoonotic diseases and environmental issues that impact human, animal, and ecosystem health.

DMP 754. Introduction to Epidemiology (3 credits)
The purpose of this course is to introduce students to the basic principles and methods of epidemiology in order to recognize and understand how disease affects populations (and the associated implications for individuals). This course will prepare students to use epidemiologic methods to solve current and future challenges to diagnose, treat, prevent, and control disease during their professional training and throughout their career.

DMP 802. Environmental Health (3 credits)
Students will be exposed to professional practice of environmental sciences, epidemiology, toxicology, occupational health and industrial hygiene, and consumer health and safety. Topics include the methods for defining environmental contamination; identifying contaminants, pathogens and toxins; assessing risks and causality; determining health impact; ameliorating hazards; and protecting the population through waste management, regulatory programs, environmental inspections, food and product safety, and environmental policy.

DMP 815. Multidisciplinary Thought and Presentation (3 credits)
Training in critical thinking, writing, and speaking for the food, veterinary, plant, health, and related sciences. With emphasis on writing, students prepare technical reports, news releases, abstracts, and commentaries. Students prepare meeting agendas and present seminars. Committed students will emerge with enhanced critical-thinking and written-presentation skills.

DMP 816. Trade and Agricultural Health (2 credits)
This course considers the multilateral trading system as it relates to food safety, food security, animal health, plant health, and international cooperation. The course content will be of value to students interested in food safety and security, epidemiology, public health, agriculture, food science, security studies, political science, agricultural economics, veterinary medicine, and international relations.

DMP 844. Global Health Issues (3 credits)

A review of global health problems and various strategies to manage international health concerns. The class is open to graduate students, including veterinary students, with an interest in public health that have at least 12 hours in biology or related courses.

DMP 870. Pathobiology Seminar (MS) (1 credit)
Oral presentations on topics in epidemiology, food safety, immunology, microbiology, molecular biology, parasitology, pathology, and toxicology. Reports will include critical review of the relevant literature; experimental design and methodology; and presentation and critical evaluation of data. This course is for MS students.

DMP 880. Problems in Pathobiology (MS) (1-6 credits)
A special problems course for graduate students working toward the MS degree in Pathobiology. The course is generally problems-or techniques-based in any of the disciplines in the Pathobiology program, conducted under the supervision of a graduate faculty in the Pathobiology Graduate Program.

DMP 888. Globalization, Cooperation, & the Food Trade (1 credit)
This course will include 15 45-minute lectures and/or reading assignments. They will be assessed through online quizzes and one essay project.

DMP 895. Topics in Pathobiology (MS) (0-18 credits)
A special course for graduate students working toward the MS degree. Lectures, readings, and discussion of topics of current interest in any of the disciplines of Pathobiology.

EDACE 832. Interpersonal and Intrapersonal Dynamics (3 credits)
This course explores various psychological and sociological factors that impact leadership. Through examining topics like verbal and nonverbal communication, active listening, learning and presentation styles, emotional intelligence, conflict, and motivation, students gain a deeper understanding of how these factors affect their personal leadership styles and impact adults they are leading.

EDACE 834. Leading Adults in a Globalized and Diverse World (3 credits)
This course provides an introduction to the foundations of adult leadership in the context of managing a culturally diverse workforce. Concepts of globalization as well as cross-cultural and international environments as they relate to adult leadership are emphasized through theory to practice projects and research.

EDACE 835. Developing Teams and Leaders (3 credits)
This course will examine how teams and leaders can be developed using theories from psychology, sociology, and learning principles. Through this course, students will be able to analyze when it is appropriate to use these tools, their strengths, weaknesses and limitations. To complement the course readings, students will be asked to share their professional experiences with team and leader development.

EDACE 836. Group Dynamics (3 credits)
This course focuses on group and team behavior and processes. Various factors that impact group behavior, processes, and effectiveness will be examined and participants will learn skills needed to more effectively manage and facilitate groups and teams of adults to achieve organizational objectives, accomplish tasks, and fulfill individual members' needs.

EDACE 886. Seminars in Adult Education (1-18 credits)
These seminars will consider research and professional development on the special interests of the students in the several fields of education represented.

FDSCI 600. Food Microbiology (2 credits)
This course deals with the isolation, identification, enumeration, and characterization of bacteria, yeasts, molds, and other microbes associated with foods and food processing. Effects of physical and chemical agents on micro-organisms will be studied. Microbiological problems in food spoilage, food preservation, food fermentation, and food-borne diseases will be discussed.

FDSCI 601. Food Microbiology Lab (2 credits)
Laboratory procedures involving isolation, identification, enumeration, and characterization of bacteria, yeasts, molds, and other microbes associated with foods and food processing.

FDSCI 630. Food Science Problems (0-18 credits)
Research or related work with others, or a literature search. Written reports are required. Any field of food science for which the student has adequate background.

FDSCI 690 - Principles of HACCP (2 credits)
A comprehensive study of the Hazard Analysis and Critical Control Point System and its application in the food industry.

FDSCI 695 - Quality Assurance of Food Products (3 credits)
A comprehensive course covering all aspects of quality assurance practices in the food industry. Emphasis is placed on interrelations of food chemistry, microbiology, sanitation, processing, and laws and regulations.

FDSCI 961. Graduate Problem in Food Science (1-18 credits)
In-depth study of a topic supervised by a member of the graduate faculty.

HN 841. Consumer Research – Fundamentals (1 credit)
Fundamentals of consumer research in terms of organizing and executing studies. Planning studies, selecting products, recruiting target consumers, and organizing study execution are included.

HN 843. Consumer Research – Qualitative (1 credit)
This course provides a deep dive into qualitative research, including the design, application, execution, and reporting. This course will educate the student on the appropriate tools for qualitative data collection based on the objectives, with a particular emphasis on interviews and focus groups.

HN 848. Consumer Research – Quantitative (1 credit)
Methods and issues associated with measuring consumer responses to products including preference testing, preference ranking, acceptance testing, hedonic scales, and consumption testing.

HORT 725. Postharvest Technology and Physiology of Horticultural Crops (3 credits)
A study of the principles and practices involved in the harvesting, handling and storage of horticultural products. The relationship of plant structure and physiology will be emphasized in discussing effects of postharvest handling and storage to maximize quality and shelf life of products.

HORT 780. Health-Promoting Phytochemicals and Physiology of Fruits and Vegetables (2 credits)
The course deals with various aspects of phytochemicals in plant-based foods including fruits and vegetables and their impact on human health and well-being. It includes potential effects of phytochemicals in promoting human health, preventing various diseases and fostering wellness. It also includes biosynthesis and metabolism of phytochemicals in plants. Emphasis is placed on developing strategies to improve the phytochemical content of food crops through approaches involving crop management, environmental and biotechnology tools. Two hours lecture per week.

HORT 790. Sustainable Agriculture (2 credits)
Historical perspectives of the sustainable agriculture movement in the U.S. and world-wide will be examined and critiqued. Components of sustainable agriculture such as agroecosystem theory, permaculture, energy use efficiency, and organic standards will be compared and evaluated. Students will demonstrate their understanding and application of the material by conducting research on a topic within sustainable agriculture and presenting the topic to the rest of the class.

HORT 791. Urban Agriculture (2 credits)
Students will become familiar with a wide variety of urban agriculture types and production systems utilized in urban settings. The course will include background readings, case studies, guest speakers, student-facilitated class discussion and lectures.

HORT 793. Farm to Fork Produce Safety (2 credits)
This course will cover all aspects of food safety for fresh produce grown in urban and rural environments, including pathogen ecology and production aspects as well as pre- harvest and postharvest factors that influence the risk of microbial contamination. More specifically, we will discuss ways to minimize the risk of human pathogens on fresh produce using strategies such as the implementation of Good Agricultural Practices (GAPs) and Good Handling Practices (GHPs). The course will cover postharvest interventions that are currently used (chemical sanitizers) as well as innovative technology applications like physical treatments, irradiation, and biological control techniques. Additionally, students will explore the impact of foodborne outbreaks on public health and the fresh produce industry in terms of economics, consumer acceptance, and legal aspects.

HORT 794. Urban Food Systems (2 credits)
This course will cover all components of urban food systems through the lens of food security, food justice, access, policy, and community planning. Students will gain skills in grant-writing, non-profit planning and management, and working with urban policy and planning boards.

HORT 795. Urban Agriculture Study Tour (1 credit)
Faculty-led trip for students to explore leading examples of urban agriculture. Each year, a trip will occur within North America, lasting approximately 7 days. The study tours will focus on urban food system development in major cities and will highlight examples of how food is being grown in urban areas and the impacts that it has on the community.

STAT 701. Fundamental Methods of Biostatistics (3 credits)
A course emphasizing concepts and practices of statistical data analysis for the health sciences. Basic techniques of descriptive and inferential statistical methods applied to health related surveys and designed experiments. Populations and samples, parameters and statistics; sampling distributions for hypothesis testing and confidence intervals for means and proportions involving one sample, paired samples and multiple independent samples; odd rations, risk ratios, simple linear regression.

STAT 703. Introduction to Statistical Methods for the Sciences (3 credits)
Statistical concepts and methods applied to experimental and survey research in the sciences; tests of hypotheses, parametric and rank tests; point estimation and confidence intervals; linear regression; correlation; one-way analysis of variance; contingency tables, chi-square tests.

STAT 705. Regression and Analysis of Variance (3 credits)
Simple and multiple linear regression, analysis of covariance, correlation analysis, one-, two-, and three-way analysis of variance; multiple comparisons; applications including use of computers; blocking and random effects.

3. Faculty Leading and Contributing to the Program

Initial program faculty support is to be provided by K-State faculty from the Olathe, Manhattan and Salina campuses. The program also has the benefit of industry/expert practitioners in the form of a 12-member External Advisory Board for the program. There will be new faculty hires to accommodate program growth, as appropriate, through the School for Applied and Interdisciplinary Studies.

Attached is the support agreement showing the academic units that form part of the PSM. Also attached is the letter of support from the 12 member External Advisory Board. All PSM programs are required to establish an active external advisory board that will assist with clarifying program objectives, identifying expected learning and professional development outcomes, and ensuring that regional workforce needs will be met.

Program Director

Janice Barrow, PhD, MBA, Associate Professor, Educational Leadership
Associate Dean for Academic Affairs and Executive Education, K-State Olathe

Core Instructional Faculty

Elizabeth Boyle, PhD, Professor and Extension Specialist, Animal Sciences and Industry (Tenured)
Teresa Douthit, PhD, Associate Professor, Animal Sciences and Industry (Tenured)
Kelly Getty, PhD, Associate Professor, Animal Sciences and Industry (Tenured)
Sara Gragg, PhD, Assistant Professor, Animal Sciences and Industry (Tenure Track) (Olathe Based)
Curtis Kastner, PhD, Professor and Director Food Science Institute (Tenured)
Justin Kastner, PhD, Associate Professor, Diagnostic Medicine/Pathobiology (Tenured)
Robert Larson, PhD, Professor, Diagnostic Medicine/Pathobiology (Tenured)
Edgar E. and M. Elizabeth Coleman Chair for Food Animal Production Medicine
Executive Director, Veterinary Medical Continuing Education
Annelise Nguyen, PhD, Associate Professor, Diagnostic Medicine/Pathobiology (Tenured)
Eleni Pliakoni, PhD, Assistant Professor, Horticulture, Forestry and Recreation Resources (Tenure Track) (Olathe Based)
C.B. Rajashekar, PhD, Professor, Horticulture, Forestry and Recreation Resources (Tenured)
Karen Schmidt, PhD, Professor, Animal Sciences and Industry (Tenured)
Candice Shoemaker, PhD, Department Head and Professor, Horticulture, Forestry and Recreation Resources (Tenured)

All the core faculty members listed above are tenured or tenure track instructional faculty who are members of the departments identified as the voting units for the proposal. Voting units identified are: Department of Animal Sciences and Industry, Department of Diagnostic Medicine/Pathobiology, Department of Horticulture, Forestry and Recreation Resources, and K-State Olathe/School of Applied and Interdisciplinary Studies.

Supplemental Faculty

Paige Adams, PhD, DVM, Research Assistant Professor, K-State Olathe (Non-Tenure Track) (Olathe Based)
Deborah Briggs, PhD, Adjunct Faculty, Diagnostic Medicine Pathobiology (Non-Tenure Track)
Executive Director, Global Alliance for Rabies Control
Kathy Brockway, MS, Professor, College of Technology and Aviation (Tenured)
Raju Dandu, PhD, Professor, College of Technology and Aviation (Tenured)
Judy Favor, PhD, Assistant Professor, Educational Leadership (Non-Tenure Track) (Olathe Based)
Trisha Moore, PhD, Assistant Professor, Biological and Agricultural Engineering (Tenure Track)
Abbey Nutsch, PhD, Assistant Professor, Animal Sciences and Industry (Non-Tenure Track)
Mark Sorell, MS, Part-time Instructor, Graduate Faculty Associate, K-State Olathe (Non-Tenure Track)

(Olathe Based)
Marianne Swaney-Stueve, PhD, Research Assistant Professor, Human Nutrition (Non-Tenure Track) (Olathe Based)
Andi Witczak, MFA, Research Assistant Professor, K-State Olathe (Non-Tenure Track) (Olathe Based)
Susan Yelich Binieki, PhD, Assistant Professor, Educational Leadership (Tenure Track)
Jeff Zacharakis, EdD, Associate Professor, Educational Leadership (Tenured)

Among the 12 core faculty members, six are professors, four are associate professors, and two are assistant professors. Ten are tenured, and two are tenure-track but not yet tenured. All 12 have terminal degrees.

Among the 12 supplemental faculty members, two are professors, one is an associate professor, four are assistant professors, three are research assistant professors, and two are part time/adjunct faculty. Three are tenured, two are tenure-track, and seven are non-tenure track. Ten have terminal degrees.

All courses that form part of the PSM are also part of the faculty members' in load teaching requirements.

No graduate assistants will be required.

4. Academic support

Current programs and faculty staffing at K-State Olathe were established as a result of a commitment agreement," *to develop current graduate degree programs as well as future degree programs*", between the K-State Olathe CEO and the Deans of the following units: College of Agriculture; College of Engineering; Graduate School, College of Veterinary Medicine, College of Education; and the College of Human Ecology. This PSM was presented to the Deans Council at their June 1, 2015 meeting with no objections. See copy of support agreement, attached, signed by the President, Provost, all the Deans and Department Heads of the academic units offering courses as part of the curriculum, and by the Program Director.

The proposed PSM will be administered under the auspices of the K-State Olathe campus, School of Applied and Interdisciplinary Studies. Dr. Janice Barrow, the Associate Dean for Academic Affairs and Executive Education, will serve as Program Director, assist students to enable successful completion of the program, and also serve as the primary program administrator and contact for the program. Additional administrative support will be provided by the Olathe-based Academic Affairs unit to include a Director of Student Services also responsible for recruitment and career placement; a Program Manager responsible for the day-to-day efficiency of academic operations; a Program Assistant responsible for student life activities; and Student Help Desk IT support. Additional academic support services for the program will be provided by staff located at K-State Olathe. These services will include assistance for prospective student inquiries, admissions advising and other support as already available for the eight graduate degree programs currently offered for students at the K-State Olathe campus. The K-State Graduate School and Libraries, as well as faculty and staff from six colleges and nine departments, already provide support to the K-State Olathe campus through various modalities.

Student Services

Existing academic support will fulfill student support needs for this program. Admissions are processed through K-State Graduate School and students will have access to enrollment services, tutoring, exam services, cashier's office, disability support services, IT helpdesk, career and employment services, referrals for counseling services and crisis assistance, online writing center, skill workshops, and Powercat Financial Counseling. Faculty and staff advisors are available on the Olathe campus to help students design a program

of study, explore career pathways, and connect to a full suite of academic resources and student services.

Library Resources and Services

Most K-State library resources and services are available to all K-State students, whether they are on or off campus. Nearly every online database, ejournal, and ebook can be accessed off campus using a K-State student eID and password. Using interlibrary loan, students have access to K-State Libraries' materials, and the print and electronic holdings at libraries around the world. Articles and book chapters up to 50 pages can be delivered electronically. Physical items such as books and videos can be shipped to students in 4-12 days via UPS. It will not be necessary to order new library materials for this program.

Computing Resources

Students have full access to the Cat's Pause lounge (Rm 225), which has computers equipped with software students need, wired Internet and WiFi, free printing, white boards, and a collaboration station with a large monitor.

5. Facilities and equipment

K-State Olathe has a new, 108,000 sq. ft., state-of-the-art facility sitting on 38 acres in the Kansas Bioscience Park. The building was designed specifically for graduate-level programming and research. The campus facilities are in excellent condition and being maintained on an ongoing basis. Most of the equipment and furniture have a 20-year life cycle or longer. Classroom technology is replaced as needed, and there are standard replacement cycles in place for desktop computers, laptops, monitors, AV systems, and projectors.

Classrooms

The K-State Olathe campus has six classrooms devoted to instruction. Additional rooms can be used when needed, including forum hall, four conference rooms, and two multi-purpose rooms. The classrooms are equipped to fully enable face-to-face instruction and mediated instruction. The following provides a sampling of the equipment and resources available for classes:

Whiteboards
Computer and monitors
Projector and projection screens
Podium with connection plates
Internet (WiFi and wired connections)
Data connection ports
Pan tilt zoom cameras
Sound system
Classroom tables with wheels
Chairs with wheels
Conference call capability
Web and video conferencing capability

Teaching Labs

The K-State Olathe campus has ten 750 sq. ft. research labs, including a fully functioning Biological Safety Level-II (BSL-II) food safety laboratory, BSL-II teaching laboratory, postharvest physiology laboratory, biological and agricultural engineering laboratory, and veterinary diagnostic laboratory. All of the equipment is in excellent, like-new condition, having been recently purchased. The following provides a sampling of the equipment and resources available for lab classes:

3D Printer
ChemiDoc MP gel and blot imager
-80C ultra-low freezer
Benchtop centrifuge
Microfuge
Stomachers/homogenizers

Shaker incubator
Biological safety cabinets
Standard incubators (1 with refrigeration)
CO_2 incubators
Light microscopes
Fluorescent microscopes
Real-time PCR
Automatic Immunomagnetic Separation (IMS)
Pipetters and pipettes
Scales for analytics
pH meter
Water activity meter
Water baths
Hot/Stir plates
Omnispense flow rate dispenser
High-speed floor model refrigerated centrifuge
Polytron
Microplate reader
Refractometer
Automatic Titrator
Color meter
Digital camera
Texture analyzer
UPLC/MS
Gas chromatography system (CO_2, O_2 and Ethylene only)
GC/MS
Environmental chambers with temperature and humidity controls
Shared cold rooms (refrigerator and freezer)
Central services room with autoclave, deionized water, flask scrubbers
Storage closet
Fume hoods
Computers

Kitchens

The K-State Olathe campus has three state-of-the-art kitchens that can be used for instruction: Teaching Kitchen, R&D Kitchen, and Presentation Kitchen. The kitchens include the following equipment and resources:

Hotel-style prep space with broad range of capabilities for processing and cooking food
19-seat presentation space with cooking island, 4-burner range, gas char grill, under-counter refrigerator
5 stations for group instruction, modular to meet varying needs
6-burner ranges with convection ovens
4-burner ranges with still ovens
2-burner induction units
5 prep tables with sinks and drawers
Hood and fire suppression
Stacked convection ovens
Steamer
Steam jacketed kettle
Braising skillet
Single fryer
30 qt. mixer
3-well hot table
3600 watt microwave
Blast chiller
4-door cooler
2-door freezer
Walk-in coolers
Walk-in freezer

6. Program review, assessment and accreditation

6.1 Program review process or methods used

The program will be assessed using both direct and indirect methods, in accordance with: (1) K-State Graduate School requirements that include a Mid-Cycle Review by the Graduate Council Assessment and Review Committee in consultation with the Dean of the Graduate School; (2) Higher Learner Commission standards; and (3) KBOR eight year cycle review to facilitate improvement of academic programs. Additionally, PSM Affiliation requires a specific set of assessments that must be reported to the PSM

organization. The data are compiled and published as part of the continuous improvement process. The Program Director, on behalf of the School of Applied and Interdisciplinary Studies, is responsible for ensuring that the core faculty and staff: (i) continuously review and improve systems developed for assessment and maintain the quality of the program; (ii) implement a plan to track PSM graduates and their progress; and (iii) maintain contact with other PSM programs to remain abreast of effective assessment practices.

6.2 Student Learning outcomes measures

The Professional Science Master in Applied Science and Technology degree has five student learning outcomes (SLOs). Please see the attached Assessment of Student Learning Plan, for details.

6.3 Specialized accrediting agency

There is no accrediting agency specific to this interdisciplinary academic focus area. However, the PSM designation requires successful application for affiliation with the Professional Science Master's organization.

The affiliation application is submitted after the program is approved by the academic institution. The application process is expected to be completed within approximately two weeks of submission. However, the proposed curriculum was submitted for pre-approval with a supportive response (full email attached), which said in part:

"We reviewed your proposal: Professional Science Master in Applied Science and Technology and Curriculum. Upon further review of your curriculum, we anticipate your program meets our guidelines and requirements." PSM National Office

Background on the PSM

The Sloan Foundation PSM initiative began in 1997 with grants to 14 research universities to support the founding of programs in the natural sciences and mathematics, followed by a targeted bioinformatics set of programs at another 12 research institutions. Concurrent with the effort by Sloan, Henry Riggs, the outgoing president of Harvey Mudd College, convinced the Keck Foundation to build an all-new master's-only graduate school designed to educate leaders for the biotechnology, pharmaceutical, healthcare product and bioagricultural (biosciences) industries. The resulting Keck Graduate Institute (KGI), associated with the Claremont Colleges in California, enrolled its first class of twenty-eight students in August 2000.Formerly managed by the Council of Graduate Schools (CGS), the PSM National Office has been housed at the Keck Graduate Institute (KGI), since 2013.

Proposal
Professional Science Master in Applied Science and Technology

A. 479 – New Program Request Form

B. 477 – New Program Curriculum Form

C. 478 – Fiscal Summary for Proposed Academic Programs

D. K-State Academic Support Agreement

E. PSM External Advisory Support Letter

F. PSM Pre-Approval Support Letter

G. Assessment of Student Learning Plan

H. Signature Sheet

New Degree Request – Kansas State University

Criteria	Program Summary
1. Program Identification	Professional Science Master in Applied Science and Technology CIP Code: 30.00 Multi-/Interdisciplinary Studies
2. Academic Unit	School of Applied and Interdisciplinary Studies
3. Program Description	The Professional Science Master in Applied Science and Technology is designed for K-State Olathe to be compliant with the Johnson County Education Research Triangle (JCERT) mandate for the campus to provide graduate programming in food, animal health and related sectors, consistent with regional demand, K-State 2025 Visionary Plan, and the Kansas Board of Regents guidelines. It is intended to be a Professional Science Master's (PSM) degree, a unique professional interdisciplinary program that prepares students for direct entry into a variety of science-related career options in industry, business, government, and non□profit organizations, progressing to leadership roles. Founded by Alfred P. Sloan Foundation in 1997, the PSM produces graduates highly valued by employers by combining advanced, graduate coursework in science with an appropriate component of professional skills development and by including an experiential learning component appropriate to the targeted employment sector. The program will be funded by K-State Olathe funds.
4. Demand/Need for the Program	The need for this program has been documented through multiple market demand studies over the past 5 years, conducted by both K-State experts and independent consultants. Market demand information was quantified through surveys of more than 100 employers across 6 economic sectors in the Kansas City area. Additionally, K-State Olathe faculty and staff have collected qualitative input through focused discussions with regional employers and employees over the last 3 years and strategic planning sessions with the K-State Olathe advisory board over the last 2 years. The results show strong interest in a Professional Science Master's (PSM) program being offered at the K-State Olathe campus. Based on estimates provided by firms primarily located in Johnson County, KS and representing 59,567 employees (20% of the workforce in Johnson County, KS), there may be more than 200 working professionals who would be interested in pursuing a PSM each year.

5. Comparative /Locational Advantage	There are other STEM programs provided in the area; however, according to the Brooking Institute 2014 report on "Greater Kansas City", those programs are inadequate to keep up with the demand. No program exists in the region or at other Regents universities similar to K-State Olathe's proposed Professional Science Master in Applied Science and Technology degree with its primary foci on food, animal health and related sectors.
6. Curriculum	Program graduation requirements are consistent with those of a Professional Science Master's (PSM) degree, which is designed to allow students to pursue advanced training and excel in STEM fields while simultaneously developing highly-valued professional skills. Students will be required to complete a minimum of 30 credit hours, which is consistent with K-State's norm. The PSM curricula elements include: • At least 50% of the course content in the natural sciences, technology, engineering, mathematics and/or computational sciences • A professional skills component • An experiential component that integrates the practical application of scientific and professional knowledge, behavior, and skills
7. Faculty Profile	Initial program faculty support is to be provided by K-State faculty from the Olathe, Manhattan and Salina campuses. The program also has the benefit of industry/expert practitioners in the form of a 12-member External Advisory Board for the program. There will be new faculty hires to accommodate program growth, as appropriate, through the School for Applied and Interdisciplinary Studies. Involvement of various academic units across K-State will enable a breadth of interdisciplinary course offerings. All the 12 core faculty members are tenured or tenure track instructional faculty who are members of the departments identified as the voting units for the proposal. Voting units identified are: Department of Animal Sciences and Industry, Department of Diagnostic Medicine/Pathobiology, Department of Horticulture, Forestry and Recreation Resources, and K-State Olathe/School of Applied and Interdisciplinary Studies. All courses that form part of the PSM degree are also part of the faculty members' in load teaching requirements.

8. Student Profile	The program will be geared to the working professional who already has an undergraduate degree, or the equivalent, in a related field, and who is seeking advancement to a management/leadership position. Standards required by the Kansas State University Graduate School will be used for any student who seeks admission. Admissions requirements include evidence of completion of a bachelor's degree from an accredited university (or the equivalent) with a grade point average above 3.0 on a 4.0 scale, excellent references from three people knowledgeable of the applicant's professional qualifications, and a statement of objectives that demonstrates that the program is an appropriate match with the applicant's aspirations. Admission is not contingent upon having a specific type of undergraduate degree; however, students without a qualifying STEM degree may be required to take prerequisites courses.
9. Academic Support	Academic support services for the program will be provided by staff located at K-State Olathe for prospective student inquiries, admissions advising and other support as already available for the 8 graduate degree programs currently offered for students at the K-State Olathe campus. No new staff will be required. Dr. Janice Barrow, the Associate Dean for Academic Affairs and Executive Education, will serve as Program Director and assist students to enable successful completion of the program. Students will have the benefit of other full time staff such as Program Manager, Director of Student Services, Program Assistant for Student Services, and academic advisors. The K-State Graduate School and Libraries, as well as faculty and staff from 6 colleges and 9 departments, already provide support to the K-State Olathe campus through various modalities.
10. Facilities and Equipment	K-State Olathe has a 110,000 sq. ft., state-of-the-art facility sitting on 38 acres in the Kansas Bioscience Park. The building was designed specifically for graduate-level programming and research. It has various interactive classroom spaces, modular research laboratories, and public/meeting spaces. -There are six classrooms devoted to instruction and additional rooms that can be used when needed, including a forum hall, four conference rooms, and two multi-purpose rooms. The classrooms are equipped to fully enable face-to-face instruction and mediated instruction. -There are ten 750 sq. ft. research labs, including a fully functioning Biological Safety Level-II (BSL-II) food safety laboratory, BSL-II teaching laboratory, postharvest physiology laboratory, biological and agricultural engineering laboratory, and veterinary diagnostic laboratory. - There are also three fully equipped state-of-the-art kitchens that can be used for instruction: Teaching Kitchen, R&D Kitchen, and Presentation Kitchen.

11. Program Review, Assessment, Accreditation	All program student learning outcomes will be assessed using both direct and indirect methods, in accordance with Higher Learner Commission standards. There is no accrediting agency specific to this academic focus area; however, PSM Affiliation requires and prescribes very stringent sets of assessments that must be reported to the organization. The data is compiled and published as part of the continuous improvement process. The student learning outcomes to be assessed: Upon successful completion of the Professional Science Master in Applied Science and Technology, the students will be able to: 1. Demonstrate advanced knowledge of one or more relevant STEM fields. 2. Demonstrate graduate level oral and written communication skills in a professional STEM environment. 3. At an advanced level, effectively analyze quantitative data for use across multiple science disciplines. 4. Synthesize multiple disciplines in order to accurately identify problems. 5. Synthesize multiple disciplines in order to develop innovative solutions.
12. Costs, Financing	Instruction will be provided by existing full-time K-State faculty who are already fully supported by the University with the potential to add qualified faculty and instructors if the demand warrants. All expenses are expected to be covered by: 1) utilizing unused capacity in existing courses, 2) revenue from tuition, and 3) JCERT funds. No additional resources will be required.

CURRICULUM OUTLINE
NEW DEGREE PROPOSALS
Kansas Board of Regents

I. Identify the new degree:

Professional Science Master in Applied Science and Technology

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

	Course Name & Number	Credits
Core	AAI 801. Interdisciplinary Process	3
	AAI 858. Capstone Experience I	1
	AAI 859. Capstone Experience II	2
Electives	*Statistics Electives – 3 credits selected from the following courses (or equivalent courses as approved by the student's supervisory committee):*	
	STAT 701. Fundamental Methods of Biostatistics	3
	STAT 703. Introduction to Statistical Methods for the Sciences	3
	STAT 705. Regression and Analysis of Variance	3
	STEM Electives – 12 credits selected from the following courses (or equivalent courses as approved by the student's supervisory committee):	
	AAI 795. Topics in Applied and Interdisciplinary Studies	1-3
	AAI 870. Seminar in Applied and Interdisciplinary Studies	1-6
	AAI 880. Problems in Applied and Interdisciplinary Studies	1-6
	AAI 895. Advanced Topics in Applied and Interdisciplinary Studies	1-6
	AAI 899. Research in Applied and Interdisciplinary Studies	1-6
	ASI 671. Meat Selection and Utilization	2
	ASI 675. Monograstic Nutrition	1
	ASI 678. Equine Nutrition	1
	ASI 776. Meat Industry Technology	3
	BAE 815. Graduate Seminar in Agricultural Engineering	1
	BAE 820. Topics in Agricultural Engineering	1-18
	DMP 710. Introduction to One Health	2
	DMP 754. Introduction to Epidemiology	3
	DMP 802. Environmental Health	3
	DMP 844. Global Health Issues	3
	DMP 870. Pathobiology Seminar (MS)	1
	DMP 880. Problems in Pathobiology (MS)	1-6
	DMP 895. Topics in Pathobiology (MS)	0-18
	EDACE 886. Seminars in Adult Education	1-18
	FDSCI 600. Food Microbiology	2
	FDSCI 601. Food Microbiology Lab	2

FDSCI 630. Food Science Problems	0-18
FDSCI 690. Principles of HACCP	2
FDSCI 695. Quality Assurance of Food Products	3
FDSCI 961. Graduate Problem in Food Science	1-18
HN 841. Consumer Research – Fundamentals	1
HN 843. Consumer Research – Qualitative	1
HN 848. Consumer Research – Quantitative	1
HORT 725. Postharvest Technology and Physiology of Horticultural Crops	3
HORT 780. Health-Promoting Phytochemicals/Physiology of Fruits/Vegetables	2
HORT 790. Sustainable Agriculture	2
HORT 791. Urban Agriculture	2
HORT 793. Farm to Fork Produce Safety	2
HORT 794. Urban Food Systems	2
HORT 795. Urban Agriculture Study Tour	1

Professional Skills Electives – 9 credits selected from the following courses (or equivalent courses as approved by the student's supervisory committee):

AAI 840. Regulatory Aspects of Drug/Vaccine Development in Animal Health	2
COT 703. Project Management for Professionals	3
COT 704. Managerial Finances, Metrics, and Analytics	3
COT 706. Informatics and Technology Management	3
DMP 815. Multidisciplinary Thought and Presentation	3
DMP 816. Trade and Agricultural Health	2
DMP 888. Globalization, Cooperation, & the Food Trade	1
EDACE 832. Interpersonal and Intrapersonal Dynamics	3
EDACE 834. Leading Adults in a Globalized and Diverse World	3
EDACE 835. Developing Teams and Leaders	3
EDACE 836. Group Dynamics	3
EDACE 886. Seminars in Adult Education	1-18

Research N/A

Practica N/A

Total credits required 30

IMPLEMENTATION YEAR FY 2017

Fiscal Summary for Proposed Academic Programs

Institution: Kansas State University Proposed Program: Professional Science Master in Applied Science and Technology

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:	5	10	10	20	15	30
B. Total SCH taken by all students in program	255		510		765	

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. In subsequent years, please include only the additional amount budgeted.				
		Implementation Year	Year 2	Year 3
Base Budget	Salaries	$7,000	$7,000	$7,000
	OOE	$2,500	$2,500	$2,500
	Total	$9,500	$9,500	$9,500

Indicate source and amount of funds if other than internal reallocation:
1) Internal reallocation made possible by excess capacity in existing courses, 2) revenue from tuition, and 3) JCERT funds

This budget assumes the following for Part I:
Full-time students will be taking 9 credits in the fall, 9 credits in the spring, and 3 credits in the summer semesters.
Part-time students will be taking 6 credits in the fall, 6 credits in the spring, and 3 credits in the summer semesters.
Additional revenue will be generated by part-time students taking a course or two, but that is not factored into this budget.

This budget assumes the following for Part II:
The majority of instruction will be provided by existing K-State faculty who are already fully supported by the University.
One part-time adjunct will need to be employed to teach the face-to-face statistical methods course. (Cost = $7,000/year)
The "Other Expenses" include materials and supplies for courses, marketing materials, and travel.
Marketing will be managed by the K-State Olathe marketing team and K-State Division of Communications & Marketing.

KANSAS STATE UNIVERSITY | Olathe

School of Applied and Interdisciplinary Studies

Professional Science Master in Applied Science and Technology
Graduate Certificate in Professional Interdisciplinary Sciences, and
Graduate Certificate in Professional Skills for STEM Practitioners

Agreement of Support

The Professional Science Master in Applied Science and Technology, the Graduate Certificate in Professional Interdisciplinary Sciences, and the Graduate Certificate in Professional Skills for STEM Practitioners (referred to as "Programs"), are proposed interdisciplinary programs to be offered through the School of Applied and Interdisciplinary Studies at the K-State Olathe Campus.

This agreement of support is entered into between K-State Olathe Innovation Campus, Inc., through its School of Applied and Interdisciplinary Studies, and Kansas State University, through its colleges and departments indicated with the signatures below. This agreement of supports is required as part of the interdisciplinary graduate program approval process.

The courses for the Programs will be accessible from the Olathe campus and utilize courses offered at the Olathe campus or online from multiple departments and other academic units across Kansas State University.

Goals and expected benefits include:

1. K-State compliance with the JCERT mandate for K-State Olathe to provide education programs and meet enrollment goals for the campus.
2. Utilize unused capacity in existing courses, facilities and infrastructure.
3. Leverage the Olathe location and funding opportunity for consulting, collaboration and growth, consistent with the K-State 2025 Visionary Plan

The School of Applied Science and Interdisciplinary Studies, will:

1. Manage the Programs and ensure the Programs meet all K-State Graduate School and Kansas Board of Regents requirements for graduate programs.
2. Ensure that policies and procedures are implemented for the Programs' development, assessment, and quality assurance.
3. Provide input, via the Olathe CEO, or designee, to the Manhattan-based or Salina-based colleges/departments relevant to the teaching effectiveness and performance of the Manhattan-based or Salina-based faculty providing courses as part of the Olathe Programs. This input may be used to determine assignment of faculty to teach courses as part of the Olathe Programs and considered in applicable evaluation processes.
4. Provide remuneration and support to participating Manhattan-based or Salina-based colleges/departments in the form of tuition distribution as follows:

   Tuition: Olathe tuition consists of resident graduate tuition and a campus fee. The tuition is set at the same level as resident graduate tuition on the Manhattan campus.

   Online courses: Any courses taught on-line as part of the Olathe Programs will be billed at tuition rates as determined through Global Campus practices.

   Face-to-face: Two basic scenarios will exist for face-to-face courses in Olathe. Courses will either be taught by Olathe-based faculty, who shall be funded by Olathe, or will be taught by Manhattan-based or Salina-based faculty, who shall be funded by the Manhattan or Salina colleges/departments. If taught by Olathe-based faculty, the Olathe campus will retain all of the tuition that students pay for the course (except for the college fee returned to the colleges). If the course is taught by Manhattan-based or Salina-based faculty, Olathe will reimburse the colleges $200 per student credit hour for face-to-face courses. The $200 per student credit hour reimbursement will be increased commensurate with tuition increases in the future.

Colleges/departments expenses and faculty support: The Manhattan-based or Salina-based colleges/departments shall be responsible for Manhattan-based or Salina-based faculty travel and other support costs based upon their own policies and practices. Olathe will provide office and support space, classrooms and laboratories, IT infrastructure and support, custodial, security, and other campus support at Olathe for the faculty teaching at Olathe.

The Manhattan-based or Salina-based participating colleges/departments, whose signatures appears below, in collaboration with the School of Applied Science and Interdisciplinary Studies, are in support of the proposed Programs and are committed to their success, and will:

1. Ensure the consistent, predictable availability of graduate courses from their departments, which are part of the Olathe Programs, as listed in the curriculum attached as Appendix "A".
2. Consistent with faculty availability, expertise and interest: (i) encourage faculty to serve as Graduate Supervisory Committee members for the Programs; and (ii) encourage faculty to participate in the academic components of the Capstone Experience Courses.
3. Assure expeditious resolution of any curricular issues related to the Programs brought forward by the Programs' Director.

To the extent there are any irreconcilable differences in carrying out the terms of this Agreement or in the delivery of the Programs, the Provost and Senior Vice President of Kansas State University shall have authority to provide and direct implementation of the final decision on behalf of all parties.

Signatures:

Kirk Schultz, President, Kansas State University/Chair, KOIC Board	9-10-15 Date
April Mason, Provost and Senior Vice President, Kansas State University	10 Sept 15 Date
Ralph Richardson, Interim Dean/CEO, Kansas State University-Olathe	14 Sept 2015 Date
Carol Shanklin, Dean, Graduate School	9-14-15 Date
Janice Barrow, Associate Dean/Programs Director, Kansas State University-Olathe	9-10-2015 Date
Sue Maes, Dean, Global Campus	9-14-15 Date
Verna Fitzsimmons, CEO/Dean, Kansas State University-Salina	9-14-15 Date
John Floros, Dean, College of Agriculture	9-14-15 Date
Peter Dorhout, Dean, College of Arts and Science	14 Sept 2015 Date
Debbie Mercer, Dean, College of Education	9.14.15 Date
Darren Dawson, Dean, College of Engineering	9/14/15 Date
John Buckwalter, Dean, College of Human Ecology	9-14-15 Date
Tammy Beckham, Dean, College of Veterinary Medicine,	9-14-15 Date
Ken Odde, Dept. Head, Animal Science and Industry	9-11-15 Date
Joe Harner, Dept. Head, Biological & Agricultural Engineering	09/15/15 Date

School of Applied and Interdisciplinary Studies

Professional Science Master in Applied Science and Technology
Graduate Certificate in Professional Interdisciplinary Sciences, and
Graduate Certificate in Professional Skills for STEM Practitioners

Agreement of Support

Signatures continued:

M.M. Chengappa, Dept. Head, Diagnostic Medicine/Pathobiology — Date 9/14/15

David Thompson, Dept. Head, Educational Leadership — Date 9/12/15

Candice Shoemaker, Dept. Head, Horticulture, Forestry, and Recreation Resources — Date 9-11-15

Mark Haub, Dept. Head, Human Nutrition — Date 9/15/15

Weixing Song, Interim Dept. Head, Statistics — Date 9/11/2015

Appendix A

Agreement of Support

Professional Science Master in Applied Science and Technology
Graduate Certificate in Professional Interdisciplinary Sciences, and
Graduate Certificate in Professional Skills for STEM Practitioners

Curriculum Courses

STEM					
Course Number	**Course Title (credits)**	**Format**	**Frequency**	**Instructor**	**Base for Instructor**
ASI 671	Meat Selection and Utilization (2 credits)	Online	Fall	Curtis Kastner	Manhattan
ASI 675	Monograstric Nutrition (1 credit)	Online	Fall	Teresa Douthit	Manhattan
ASI 678	Equine Nutrition (1 credit)	Online	Fall, odd years	Teresa Douthit	Manhattan
ASI 776	Meat Industry Technology (3 credits)	Online	Fall, Spring, Summer	Kelly Getty	Manhattan
BAE 815	Graduate Seminar in Agricultural Engineering (1 credit)	F2F Olathe	Fall, Spring	Trisha Moore / Rotates	Olathe/Manhattan
BAE 820	Topics in Agricultural Engineering (1-6 credits)	F2F Olathe	Fall, Spring	Mei He / Rotates	Olathe
DMP 710	Introduction to One Health (2 credits)	F2F Olathe, Online	Fall	Paige Adams	Olathe
DMP 754	Introduction to Epidemiology (3 credits)	Online	Fall	Bob Larson	Manhattan
DMP 802	Introduction to Environmental Health (3 credits)	Online	Spring	Annelise Nguyuen	Manhattan
DMP 815	Multidisciplinary Thought and Presentation (3 credits)	F2F Olathe	Fall, Spring	Kastner / Nutsch	Manhattan
DMP 844	Global Health Issues (3 credits)	Online	Spring	Debbie Briggs	Manhattan
DMP 870	Pathobiology Seminar MS (1 credit)	F2F Olathe	Fall, Spring, Summer	Paige Adams	Manhattan
DMP 880	Problems in Pathobiology MS (1-3 credits)	F2F Olathe	Fall, Spring, Summer	Variable	Manhattan
DMP 888	Globalization, Cooperation, & the Food Trade (1 credit)	Online	Fall, Spring	Justin Kastner	Manhattan
DMP 895	Topics in Pathobiology MS (1-3 credits)	F2F Olathe, Online	Fall, Spring, Summer	Variable	Manhattan
FDSCI 600	Food Microbiology (2 credits)	F2F Olathe, Online	Fall	Sara Gragg / Rotates	Olathe
FDSCI 601	Food Microbiology Lab (2 credits)	F2F Olathe, Online	Fall	Sara Gragg / Rotates	Olathe
FDSCI 630	Food Science Problems (0-6 credits)	F2F Olathe, Online	Fall, Spring, Summer	Sara Gragg	Olathe
FDSCI 690	Principles of HACCP (2 credits)	Online	Fall	Elizabeth Boyle	Manhattan
FDSCI 695	Quality Assurance of Food Products (3 credits)	Online	Fall	Karen Schmidt	Manhattan
FDSCI 961	Graduate Problem in Food Science (1-6 credits)	F2F Olathe, Online	Fall, Spring, Summer	Sara Gragg	Olathe
HN 841	Consumer Research - Fundamentals (1 credit)	F2F Olathe	Fall	Marianne Swaney-Stueve	Olathe
HN 843	Consumer Research - Qualitative (1 credit)	F2F Olathe	Fall	Marianne Swaney-Stueve	Olathe
HN 848	Consumer Research - Quantitative (1 credit)	F2F Olathe	Fall	Marianne Swaney-Stueve	Olathe
HORT 725	Postharvest Technology and Physiology of Horticultural Crops (3 credits)	F2F Olathe	Fall, even years	Pliakoni	Olathe
HORT 780	Health-Promoting Phytochemicals and Physiology of Fruits and Vegetables (2 credits)	F2F Olathe	Spring	Rajashekar	Manhattan
HORT 790	Sustainable Agriculture (2 credits)	F2F Olathe	Fall, odd years	Janke and Pliakoni	Manhattan
HORT 791	Urban Agriculture (2 credits)	F2F Olathe	Fall	Janke and Pliakoni	Manhattan
HORT 793	Farm to Fork Food Safety (2 credits)	F2F Olathe	Fall, even years	Gragg and Pliakoni	Olathe
HORT 794	Urban Food Systems (2 credits)	F2F Olathe	Spring, even years	Pliakoni and Shoemaker	Olathe
HORT 795	Urban Agriculture Study Tour (1 credit)	F2F Olathe	Fall, Spring, Summer	Pliakoni	Olathe
STAT 701	Fundamental Methods of Biostatistics (3 credits)	F2F Olathe	Fall, Spring, Summer	Mark Sorell	Olathe
STAT 703	Introduction to Statistical Methods for the Sciences (3 credits)	F2F Olathe	Fall, Spring, Summer	Mark Sorell	Olathe
STAT 705	Regression and Analysis of Variance (3 credits)	F2F Olathe	Fall, Spring, Summer	Mark Sorell	Olathe
Professional					
Course Number	**Course Title (credits)**	**Format**	**Frequency**	**Instructor**	**Base for Instructor**
AAI 801	Interdisciplinary Process (3 credits)	F2F Olathe	Fall, Spring	Andi Witczak	Olathe
AAI 840	Reg. Aspects of Drug and Vacc Dev. in Animal Health (2 credits)	Hybrid	Fall	Paige Adams/Mike Apley	Olathe
COT 703	Project Management for Professionals (3 credits)	Online	Fall	Raju Dandu	Salina
COT 704	Managerial Finances, Metrics, and Analytics (3 credits)	Online	Spring	Kathy Brockway	Salina
COT 706	Informatics and Technology Management (3 credits)	Online	Spring	Raju Dandu	Salina
DMP 815	Multidisciplinary Thought and Presentation (3 credits)	F2F Olathe	Fall, Spring	Kastner / Nutsch	Manhattan
DMP 816	Trade & Agricultural Health (2 credits)	Online	Spring	Justin Kastner	Manhattan
DMP 888	Globalization, Cooperation, and Food Trade (1 credit)	Online	Fall, Spring	Justin Kastner	Manhattan
EDACE 832	Interpersonal and Intrapersonal Communications (3 credits)	F2F Olathe, Online	Spring, Summer	Judy Favor	Olathe
EDACE 834	Leading Adults in a Globalized and Diverse World (3 credits)	F2F Olathe, Online	Fall	Susan Yelich Binieki	Manhattan
EDACE 835	Developing Teams & Leaders (3 credits)	F2F Olathe, Online	Spring	Jeff Zacharakia	Manhattan
EDACE 836	Group Dynamics (3 credits)	F2F Olathe, Online	Spring, Summer	Judy Favor	Olathe
EDACE 886	Seminars in Adult Education (1-6 credits)	F2F Olathe, Online	On demand	Rotates	Olathe
Students may also choose from the following K-State Olathe based courses					
AAI 795	Topics in Applied and Interdisciplinary Studies (1-3 credits)				
AAI 870	Seminar in Applied and Interdisciplinary Studies (1-6 credits)				
AAI 880	Problems in Applied and Interdisciplinary Studies (1-6 credits)				
AAI 895	Advanced Topics in Applied and Interdisciplinary Studies (1-6 credits)				
AAI 899	Research in Applied and Interdisciplinary Studies (1-6 credits)				
Capstone					
Course Number	**Course Title (credits)**	**Format**	**Frequency**	**Instructor**	**Base for Instructor**
AAI 858	Capstone Experience I (1 credits)	F2F, Online, Hybrid	On demand	Janice Barrow	Olathe
AAI 859	Capstone Experience II (2 credits)	F2F, Online, Hybrid	On demand	Janice Barrow	Olathe

Note: Courses may be added or deleted in response to demand and stakeholder needs.

Proposed Professional Science Master and Graduate Certificate at K-State Olathe

March 24, 2015

Janice Barrow
Associate Dean for Academic Affairs and Executive Education
Kansas State University Olathe Innovation Campus

Dear Dr. Barrow,

In my capacity as Chair of the K-State Olathe Advisory Board, I am pleased that discussions about offering a degree program geared to the needs of businesses in the greater KC metro are being developed. I understand that the proposed *Professional Science Master in Applied Science and Technology*, and proposed *Graduate Certificate in Professional Interdisciplinary Sciences* are designed for K-State Olathe to be compliant with the Johnson County Education Research Triangle (JCERT) mandate which is for the campus to provide graduate programming in food, animal health and related sectors, consistent with regional demand.

As members of the Advisory Board, we further understand that the programs require the input and support of *"an active external advisory board that will assist with clarifying program objectives, identifying expected learning and professional development outcomes, and ensuring that regional workforce needs will be met".*

It is with the foregoing understanding that I and other Board members offer our support for the program development and delivery pending program approval by the University and Kansas Board of Regents.

Sincerely

Allen Gross
Chair of Advisory Board, K-State Olathe Innovation Campus (KOIC)
Vice President, EFL Associates, Inc.

Additional Signatures/Affiliations of Members of the KOIC Advisory Board:

	Signature	Name	Industry Affiliation
1.		ROBERT DREGNER	BANKING
2.		LAURIE MINARD	GARMIN

3.	Joseph M. Sopcich	Joseph M. Sopcich	JCCC
4.		WAYNE C. CHEEK	KCALSI
5.		ERNST HEINEN	ARATANA THERAPEUTICS
6.		Michael Boehm	JCERT
7.		Greg Musil	JCERT
8.		JEFF PLACEK	McCOWN GORDON CONSTRUCTION
9.		DAN ABITZ	GEORGE BUTLER ASSOC.
10.		Kimberly Young	KC Animal Health Corridor
		Bernd Eichenmueller	Boehringer Ingelheim Vetmedica

Janice Barrow

From: Kiriko Komura <Kiriko_Komura@kgi.edu>
Sent: Thursday, May 14, 2015 1:59 PM
To: Janice Barrow
Cc: Carol Shanklin
Subject: RE: PSM Question...

Dear Dean Barrow,

Thank you very much for your e-mail. Your curriculum information is extremely helpful. We really appreciate your time and effort on this matter.

We reviewed your proposal: Professional Science Master in Applied Science and Technology and Curriculum. Upon further review of your curriculum, we anticipate your program meet our guidelines and requirements. We would like to clarify issues with you on STEM courses and Capstone courses on your proposal.

The elective STEM courses (12 credits) look great. However, AAI 780 and AAI880 Interdisciplinary Studies are listed as 1-18 credits. We would like to ensure that all students in your program take more than 50% of STEM content as well as the recommended 20% of the experiential component courses. It would be helpful if you could show more details of those courses in your course description.

The capstone courses are very well designed. We appreciate your effort on this. When you submit your application, please state that the capstone courses are required for all students in your program and what kind of capstone courses your students take, such as internship.

Finally, it is very important for us to know how your advisory board members will be involved in your curriculum/program development, capstone courses, and external assessment.

Thank you very much for your patience and understanding on this matter.
We look forward to working with you on your PSM affiliation process.

Best Regards,
Kiriko

Kiriko Komura, Ph.D.
Administrative Director,
PSM National Office
535 Watson Drive
Claremont, CA 91711
Phone: (909) 607-9368
E-mail: psmoffice@sciencemasters.com
Website: http://www.sciencemasters.com/

Graduate School

Professional Science Master in Applied Science and Technology

School of Applied and Interdisciplinary Studies, K-State Olathe

Assessment of Student Learning Plan

A. College, Department, and Date

College: School of Applied and Interdisciplinary Studies
Department: School of Applied and Interdisciplinary Studies
Date: August 21, 2015

B. Contact Person(s) for the Assessment Plan

Dr. Janice M. Barrow,
Associate Dean for Academic Affairs and Executive Education
Associate Professor, School of Applied and Interdisciplinary Studies, KSO
Email: Jbarrow@ksu.edu

C. Name of Proposed Degree Program

Professional Science Master in Applied Science and Technology

D. Assessment of Student Learning Three-Year Plan

1. Student Learning Outcome(s)

a. **Student learning outcomes for the program.**

Upon successful completion of the Professional Science Master in Applied Science and Technology, the students will be able to:

1. Demonstrate advanced knowledge of one or more relevant STEM fields.
2. Demonstrate graduate level oral and written communication skills in a professional STEM environment.
3. At an advanced level, effectively analyze quantitative data for use across multiple science disciplines.
4. Synthesize information from multiple disciplines in order to accurately identify problems.
5. Synthesize information from multiple disciplines in order to develop innovative solutions.

b. **Indicate at least three outcomes on the above list that will be assessed by the first mid-cycle review.**

Each and every student learning outcome is equally important; therefore, all the student learning outcomes will be assessed by the first mid-cycle review.

Please see Appendix A for the Alignment Matrix

2. Assessment Strategies

How will each of the learning outcomes be assessed?

a. Direct Measures

All the student learning outcomes will be assessed using a variety of direct measures as shown in the table below.

Student Learning outcome	**Direct Measure**
1. Demonstrate advanced knowledge of one or more relevant STEM fields.	1) Rubric used for Capstone Experience Proposal in the required AAI 858 in the Capstone Experience I course*
2. Demonstrate graduate oral and written communication skills in a professional STEM environment.	1) Rubric used for the Written Poster Presentation in the required AAI 859 Capstone Experience II course* 2) Rubric used for the Oral Presentation in the required AAI 859 Capstone Experience II course*
3. At an advanced level, effectively analyze quantitative data for use across multiple science disciplines.	1) Rubric used for the quantitative portion of the Oral Poster Presentation in the required AAI 859 Capstone Experience II course*
4. Synthesize information from multiple disciplines in order to accurately identify problems.	1) Rubric used to assess problem identification in the proposal of the required AAI 858 in the Capstone Experience 1 course*
5. Synthesize information from multiple disciplines in order to develop innovative solutions.	1) Rubric used to assess the planned solution in the proposal of the required AAI 858 in the Capstone Experience 1 course*

***The rubrics have been included in Appendix B.

b. **Indirect Measures**

Completion Assessments

a. Student Self-Assessment of the Student Learning Objectives students
b. Survey of capstone experience/internship supervisors for external feedback
c. Program Assessment

Post Completion Assessment

Survey of alumni

c. Number of students included in the assessment

All students completing the degree will be included in the assessment process. Results will be compiled for the academic year and then reported by the total group and by disaggregated groups, as appropriate. For a relatively small number of students, as determined by the degree committee, only narrative summaries will be reported.

d. **Timetable**

Direct Measures: Data from each of the measures will be compiled at the conclusion of each semester in an aggregate format, by the Program Director.

Indirect Measures: The completion surveys will be sent immediately upon the completion of the program, and complied in an aggregate format, for all the students and capstone experience supervisors, in an academic year. The post completion survey will be sent to the graduates/ alumni one year after completion of the program, during the summer.

3. Results and Review of Student Learning Outcomes and Assessment Strategies

a. Describe the process the faculty will follow to review the results of assessment data.

The Program Director is responsible for compiling the assessment data which will be reported and reviewed at regularly scheduled degree committee meetings held at the end of each semester. All degree faculty committee members will review the data and make recommendations for program and assessment revisions with input from the degree program's External Advisory Board.

b. Describe any other program improvement procedures that will be followed (e.g. formative assessments of delivery method, corporate or employer surveys).

The Professional Science Master's degree has specific assessment requirements and is monitored externally by the managing organization, which requires that approved programs:

1. Develop systems for assessment and maintenance of quality control.
2. Ensure that there is a plan to track PSM graduates and their progress.
3. Maintain contact with other PSM programs to remain abreast of effective assessment practices.

Post completion data is used by the Professional Science Master's (PSM) for longitudinal comparisons, to highlight current trends, to track career progressions, and to assess whether the goals of the PSM are being achieved.

Appendix A
Alignment Matrix for Graduate Program: Professional Science Master in Applied Science and Technology

SLO/Required Courses/experiences	STEM Courses Elected*	Statistics Course Selected STAT 701, 703, or 705	Professional Courses Elected*	Required Interdisciplinary Process: AAI 801	Required Capstone Experience Courses: AAI 858, AAI 859
Degree program SLOs					
1. Demonstrate advanced knowledge of one or more relevant STEM fields.	X	X			A
2. Demonstrate appropriate oral and written communication skills in a professional STEM environment.					A
3. At an advanced level, effectively analyze quantitative data for use across multiple science disciplines.		X			
4. Synthesize information from multiple disciplines in order to accurately identify problems.			X		
5. Synthesize information from multiple disciplines in order to develop innovative solutions.			X		A
University SLOs (Graduate Programs)					
Knowledge	X	X	X	A	A
Skills				X	A
Attitudes and Professional Conduct				X	A

- Place an "X" for courses or experiences in which students have the opportunity to learn the outcome (coursework, other program requirements).
- Place an "A" for courses or experiences in which student performance is used for program level assessment of the outcome. (assignments in courses, evaluation of final thesis, report, dissertation)

*STEM and Professional elective course selections are listed on the next page

Professional Science Master in Applied Science and Technology

Elective Stem and Professional Courses for Alignment Matrix

STEM	
Course Number	**Course Title (credits)**
ASI 671	Meat Selection and Utilization (2 credits)
ASI 675	Monograstric Nutrition (1 credit)
ASI 678	Equine Nutrition (1 credit)
ASI 776	Meat Industry Technology (3 credits)
BAE 815	Graduate Seminar in Agricultural Engineering (1 credit)
BAE 820	Topics in Agricultural Engineering (1-6 credits)
DMP 710	Introduction to One Health (2 credits)
DMP 754	Introduction to Epidemiology (3 credits)
DMP 802	Introduction to Environmental Health (3 credits)
DMP 815	Multidisciplinary Thought and Presentation (3 credits)
DMP 844	Global Health Issues (3 credits)
DMP 870	Pathobiology Seminar MS (1 credit)
DMP 880	Problems in Pathobiology MS (1-3 credits)
DMP 888	Globalization, Cooperation, & the Food Trade (1 credit)
DMP 895	Topics in Pathobiology MS (1-3 credits)
FDSCI 600	Food Microbiology (2 credits)
FDSCI 601	Food Microbiology Lab (2 credits)
FDSCI 630	Food Science Problems (0-6 credits)
FDSCI 690	Principles of HACCP (2 credits)
FDSCI 695	Quality Assurance of Food Products (3 credits)
FDSCI 961	Graduate Problem in Food Science (1-6 credits)
HN 841	Consumer Research - Fundamentals (1 credit)
HN 843	Consumer Research - Qualitative (1 credit)
HN 848	Consumer Research - Quantitative (1 credit)
HORT 725	Postharvest Technology and Physiology of Horticultural Crops (3 credits)
HORT 780	Health-Promoting Phytochemicals and Physiology of Fruits and Vegetables (2 credits)
HORT 790	Sustainable Agriculture (2 credits)
HORT 791	Urban Agriculture (2 credits)
HORT 793	Farm to Fork Food Safety (2 credits)
HORT 794	Urban Food Systems (2 credits)
HORT 795	Urban Agriculture Study Tour (1 credit)
Professional	
Course Number	**Course Title (credits)**
AAI 801	Interdisciplinary Process (3 credits)
AAI 840	Reg. Aspects of Drug and Vacc Dev. in Animal Health (2 credits)
COT 703	Project Management for Professionals (3 credits)
COT 704	Managerial Finances, Metrics, and Analytics (3 credits)
COT 706	Informatics and Technology Management (3 credits)
DMP 815	Multidisciplinary Thought and Presentation (3 credits)
DMP 816	Trade & Agricultural Health (2 credits)
DMP 888	Globalization, Cooperation, and Food Trade (1 credit)
EDACE 832	Interpersonal and Intrapersonal Communications (3 credits)
EDACE 834	Leading Adults in a Globalized and Diverse World (3 credits)
EDACE 835	Developing Teams & Leaders (3 credits)
EDACE 836	Group Dynamics (3 credits)
EDACE 886	Seminars in Adult Education (1-6 credits)
Students may also choose from the following K-State Olathe based courses	
AAI 795	Topics in Applied and Interdisciplinary Studies (1-3 credits)
AAI 870	Seminar in Applied and Interdisciplinary Studies (1-6 credits)
AAI 880	Problems in Applied and Interdisciplinary Studies (1-6 credits)
AAI 895	Advanced Topics in Applied and Interdisciplinary Studies (1-6 credits)
AAI 899	Research in Applied and Interdisciplinary Studies (1-6 credits)

Appendix B: Rubrics and Surveys

Professional Science Master in Applied Science and Technology

Assessment of: Advanced knowledge of one or more STEM fields (SLO1) Written Communication (SLO 2) Identify Problem (SLO 4) and Develop Solution (SLO 5)

Rubric used for the Written Proposal in the required AAI 858 Capstone Experience I course

	Capstone 4	**Milestones** 3	 2	**Benchmark**** 1
Reflection of prior advance STEM learning	Reviews prior advanced learning of one or more relevant STEM field in depth to reveal significantly changed perspectives about STEM field(s) which provide foundation for expanded knowledge, growth, and maturity over time.	Reviews prior learning of one or more relevant STEM field in depth, revealing fully clarified meanings or indicating broader perspectives about STEM field(s)	Reviews prior advanced learning of one or more relevant STEM field with some depth, revealing slightly clarified meanings or indicating a somewhat broader perspective about STEM field(s)	Reviews prior advanced learning of one or more relevant STEM field at a surface level, without revealing clarified meaning or indicating a broader perspective about STEM field(s)
Define Problem	Demonstrates the ability to construct a clear and insightful problem statement with evidence of all relevant contextual factors.	Demonstrates the ability to construct a problem statement with evidence of most relevant contextual factors, and problem statement is adequately detailed.	Begins to demonstrate the ability to construct a problem statement with evidence of most relevant contextual factors, but problem statement is superficial	Demonstrates a limited ability in identifying a problem statement or related contextual factors.
Identify Strategies	Identifies multiple approaches for solving the problem that apply within a specific context.	Identifies multiple approaches for solving the problem, only some of which apply within a specific context.	Identifies only a single approach for solving the problem that does apply within a specific context.	Identifies one or more approaches for solving the problem that do not apply within a specific context.
Propose Solutions/ Hypotheses	Proposes one or more solutions/ hypotheses that indicate a deep comprehension of the problem. Solution/hypotheses are sensitive to contextual factors as well as all of the following: ethical, logical, and cultural dimensions of the problem.	Proposes one or more solutions/hypotheses that indicate comprehension of the problem. Solutions/hypotheses are sensitive to contextual factors as well as the one of the following: ethical, logical, or cultural dimensions of the problem.	Proposes one solution/ hypothesis that is "off the shelf" rather than individually designed to address the specific contextual factors of the problem.	Proposes a solution/hypothesis that is difficult to evaluate because it is vague or only indirectly addresses the problem statement.
Organization	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable and is skillful and makes the content of the presentation cohesive.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is intermittently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is not observable within the presentation.
Sources and Evidence	Demonstrates skillful use of high- quality, credible, relevant sources to develop ideas that are appropriate for the disciplines and genre of the writing	Demonstrates consistent use of credible, relevant sources to support ideas that are situated within the discipline and genre of the writing.	Demonstrates an attempt to use credible and/or relevant sources to support ideas that are appropriate for the discipline and genre of the writing.	Demonstrates an attempt to use sources to support ideas in the writing.

**No points for performance below benchmark level.

Professional Science Master in Applied Science and Technology
Direct Assessment Rubric: Oral Communication (SLO 2) and Analysis of Quantitative Data (SLO3)
Rubric used for the Oral Presentation in the required AAI 859 Capstone Experience II course

	Capstone 4	**Milestones** 3	 2	**Benchmark**** 1
Organization	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable and is skillful and makes the content of the presentation cohesive.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is intermittently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is not observable within the presentation.
Language	Language choices are imaginative, memorable, and compelling, and enhance the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are thoughtful and generally support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are mundane and commonplace and partially support the effectiveness of the presentation. Language inpresentation is appropriate to audience	Language choices are unclear and minimally support the effectiveness of the presentation. Language in presentation is not appropriate to audience
Delivery	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation compelling, and speaker appears polished and confident.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation interesting, and speaker appears comfortable.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation understandable, and speaker appears tentative.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) detract from the understandability of the presentation, and speaker appears uncomfortable.
Analysis of Quantitative Data	Uses the quantitative analysis of data as the basis for deep and thoughtful judgments, drawing insightful, carefully qualified conclusions from this work.	Uses the quantitative analysis of data as the basis for competent judgments, drawing reasonable and appropriately qualified conclusions from this work.	Uses the quantitative analysis of data as the basis for workmanlike (without inspiration or nuance, ordinary) judgments, drawing plausible conclusions from this	Uses the quantitative analysis of data as the basis for tentative, basic judgments, although is hesitant or uncertain about drawing conclusions from this work.
Central Message	Central message is compelling (precisely stated, appropriately repeated, memorable, and strongly supported.)	Central message is clear and consistent with the supporting material.	Central message is basically understandable but is not often repeated and is not memorable.	Central message can be deduced, but is not explicitly stated in the presentation.

**No points for performance below benchmark level.

Professional Science Master in Applied Science and Technology
Student SLO Self-Assessment

Please rate your learning related to the four Student Learning Outcomes and provide comments below.

Student Learning Outcomes (SLO)	Ratings Low		High
1. I have graduate level knowledge of one or more STEM fields.	1	2	3
Why do you rate yourself at this level?			
2. My oral and written communication skills as used in a professional STEM environment, have improved as a result of this program	1	2	3
Why do you rate yourself at this level?			
3. I am able to effectively analyze quantitative data for use across multiple science disciplines.	1	2	3
Why do you rate yourself at this level?			
4. I am able to synthesize information from multiple disciplines in order to accurately identify problems.	1	2	3
Why do you rate yourself at this level?			
5. I am able to synthesize information from multiple disciplines in order to develop innovative solutions.			
Why do you rate yourself at this level?			
Describe how you may approach work demands differently, as a result of this program			

Capstone Experience Supervisor Feedback Survey

Please use the following system to evaluate the student.

1 = Definitely Not 2 = No 3 = Somewhat 4 = Yes 5 = Definitely Yes

1. Did the student have sufficient knowledge and skills to do the projects/assignments given him/her?

DN	**N**	**S**	**Y**	**DY**
1	2	3	4	5

2. Did the student master the objectives established for the Capstone Experience project? Please explain.

DN	**N**	**S**	**Y**	**DY**
1	2	3	4	5

3. Do you consider this Capstone Experience project mutually beneficial to the student and the agency?

DN	**N**	**S**	**Y**	**DY**
1	2	3	4	5

4. What do you consider to be the weaknesses of the student?

5. What do you consider to be the outstanding characteristics of the student?

Professional Science Master in Applied Science and Technology

Program Completion Questions

1. Please rate the following dimensions on a scale of Excellent to Poor
   - The intellectual quality of the faculty
   - The intellectual quality of my fellow graduate/professional students
   - The relationship between faculty and graduate/professional students
   - Program's ability to integrate recent developments in my field
   - Program space and facilities
   - Overall quality of graduate level teaching by faculty
   - Amount of financial support
   - Quality of academic advising and guidance
   - Helpfulness of staff members in my department or program
   - Assistance in finding employment
   - The opportunity to interact across disciplines
   - Academic standards in my program
   - Overall program quality

2. To what extent do you agree or disagree with each of the following statements?
   - Students in my program are treated with respect by faculty.
   - Faculty members are willing to work with me.
   - Rapport between faculty and students in my program is good.
   - My own relationships and interaction with faculty are good.
   - There are tensions among faculty that affect students.
   - Financial support for students in my program is distributed fairly.
   - Students in my program are collegial.
   - My relationships and interaction with other students in my program are good.
   - Overall, the climate of my program is positive.
   - Program activities foster a sense of intellectual community.
   - Program content supports my research/professional goals.
   - Program structure encourages student collaboration or teamwork.
   - Program structure provides opportunities to take coursework outside my own department.
   - Program structure provides opportunities to engage in interdisciplinary work.
   - Amount of coursework seems appropriate to the degree.

3. Please indicate the importance to you, and the extent to which you feel your abilities in the following areas were enhanced, during your program. *(This would be set up with a slide, so they could respond to which degree they were important (1-10) and then do what degree the abilities were enhanced in the program).*

Problem Solving	Written Communication Skills
Oral Communications Skills	Interdisciplinarity

4. If you could change one thing about your experience as a graduate/professional student at this university to make it more successful or fulfilling. what would it be?

5. Which aspect of your graduate/professional program pleased you the most?

6. Were there aspects of your graduate/professional program that you found problematic?

7. What changes would you recommend for the program in the future?

Professional Science Master in Applied Science and Technology

Student Outcome/Post Completion Survey

The survey will collect the following core data:

Employment Status
Sector of Employment
Job Title
Primary work activity
Salary range

All things considered, my PSM program met my expectations

1 = Definitely Not 2 = No 3 = Somewhat 4 = Yes 5 = Definitely Yes

DN	**N**	**S**	**Y**	**DY**
1	2	3	4	5

Regarding the Student Learning Outcomes:

1. How have you applied the knowledge gained in one or more STEM fields?

2. How have you used the oral and written Communication skills in your professional environment?

3. In what ways have you used quantitative date to analyze STEM data?

4. In what ways have you synthesized information from multiple disciplines to identify problems?

5. In what ways have you synthesized information from multiple disciplines to develop innovative solutions?