PROGRAM REVIEW

Department: Agriculture

Date of Program Review: 2020
Prepared by: Sara Sutton

TABLE OF CONTENTS

Appendices

Full-Time Faculty Qualifications
List of courses included in the program

- **Advising degree sheet (Course catalog)**
- **Degree Audit courses (Registrar)**
- **Program Inventory, if applicable (Instruction office)**
- **Courses offered in the last 3 years (Instruction office)**

ACADEMIC PROGRAM/DISCIPLINE REVIEW
Fort Scott Community College

Introduction to Program

I. Scope

A. Program Relation to College Mission, Core Values, and Strategic Plan:

1. **How do the goals and measurable objectives for the program/discipline help the college meet its mission, core values, and strategic plan?**

   The goals and objectives of this program compliment the mission and strategic plan of the institution. Upon the completion of the Agricultural course work, students will be able to demonstrate a well-rounded agricultural background. This includes not only agricultural knowledge but financial management, problem solving skills, communication skills, the analysis of cultures and heritage as well as performing arts. This helps the college meet its mission because the program provides technical and academic curriculum to meet student needs. Instructors in the department foster relationships between the college and its communities to teach the measurable objectives in this program.

2. **What specific goals of the strategic plan are affected by this? Please explain.**

   Goal #1: Foster relationships with the communities FSCC serves –

Instructors within the department reach out to community members to provide students with real world agricultural application of course content. This includes experts in the field of soil science, plant science, animal reproduction, agricultural communications and many more. Students reap the benefit of the knowledge while FSCC builds relationships with individuals in the content area. These relationships provide a mutual benefit. Our students receive hands on experiences while allowing the experts to recruit and foster relationships that may end up being a recruit for employment in the future.

Goal #2: Cultivate quality enhancements for education and learning –
Instructors within the department are supported in their professional development endeavors. Instructors use this to increase active learning in the classroom. Many times throughout the year, instructors attend content specific professional development that aids in the success of the measurable outcomes of the department. Technology has also recently been updated in the agricultural building which indirectly affects all classes taught in the department. The new technology has allowed the department to stay up to date and cutting edge to enhance the learning experience for our students.

Goal #3: Promote student success –
Instructors within the department encourage student participation in FSCC sponsored activities. Collegiate Farm Bureau is a student organization open to all students interested in agriculture. This organization helps the department reach its goals by covering a wide range of content, activities and leadership skills while developing a sense of community, thus, promoting student success.

B. Program/Discipline Demand/Need:

If applicable, provide any advisory board meeting minutes.

1. **Describe the need for the program/classes based on regional demands.**
   The need for this program is of high demand. FSCC is located within the heart of the farming and ranching region of America. Many of the students that attend this program will need this curriculum in order to be

successful as they move through their farming or ranching careers. Students that attend this program, typically go back to a family farm or ranch, find jobs in the field and some will possibly further their educational career. The program offers many different courses that are not offered at other comparable programs. Classes such as Cattle Artificial Insemination, Animal Reproduction, Livestock Ultrasound Technology and Agricultural Communications are classes that set FSCC's program apart from others. These classes will give students a leg up with the hands on experience they will receive. These courses, along with the others offered in the program, give students a well-rounded background in farming and ranching.

Along with the unique classes, our program offers Livestock Judging, Meat Judging, Collegiate Rodeo and a Collegiate Farm Bureau chapter. These extracurricular activities provide specialized opportunities for students. These activities could lead a student into a career path they might not have had the opportunity to learn of elsewhere. Coupling the coursework with the activities, this program provides exceptional options for the needs of the students in the region.

2. **Is program revision needed? If yes, provide a detailed rationale supporting the program change.**
   Yes, program revision is needed.
   The program has not been revised in many years thus needing a thorough walk-through and evaluation of all of its components. Updating of curriculum and content is needed for this program to stay relevant in the agricultural field. This revision of the program will only benefit the students of the institution as the program strives to stay as up to date as possible within the content area. The need to update the programs certification with the associates' degree is of high importance.

3. **Describe how the revised program differs from the current one?**
   The department has added some classes to the program that need to be placed within the programs required courses. Total hours for the Farm and Ranch Management Certificate also needs evaluated.

A review of the assessment for the program is needed. Course level outcomes that are assessed need to be consistent from year to year to collect data for decision making. The creation of an assessment plan is needed as well as an action plan to carry out the program's assessment.

C. Program/Discipline Analysis:

1. **What procedures are used to ensure that course content is up-to-date?**
   The instructors within the department stay up-to-date by evaluating each class continuously by communicating with surrounding agricultural institutions, industry professionals, and advisory board members. Having these relationships provides the department with current information that helps drive decision making over course content and outcomes to provide students with the most up-to-date information. When instructors cannot get the information they need through this avenue, they turn to their own research and find the answers they are looking for. This may happen by analyzing reputable online resources, reaching out to a new expert, evaluating new textbooks or talking with industry professionals in a specific branch of agriculture.

2. **What is the process for textbook review? Please list the book(s) and ISBN for each course.**

   AGR 1013 Agricultural Calculations – Nina H. Mitchell; 2012; Mathematical Applications in Agriculture; Delmar, Cengage Learning; ISBN10: 1-111-31066-1; ISBN13: 978-1-111-31066-0

   AGR 1032 Principles of Livestock- Recommended: None

   AGR 1043 Agricultural Leadership – Cliff Rickets and John Ricketts; 2017; Leadership Personal Development and Career Success; Delmar, Cengage Learning; ISBN10: 9781305953819; ISBN13: 978-1305953819

   AGR 1044 Agricultural Experience – No book needed.

AGR 1053 Intro to Computers in Agriculture – No book needed.

AGR 1204 Principles of Soil Science – Rowell, David L. Soil Science: Methods & Applications. Taylor & Francis, 2016. ISBN-13: 978-1138144989

AGR 1211 Agriculture Orientation – FSCC Orientation Handbook

AGR 1243 Principles of Animal Science- Recommended: iCEV Membership and Scientific Farm and Animal Production, Robert E. Taylor and Thomas G Field

AGR1252 Animal Science and Industries- Recommended: iCEV Membership

AGR 1253 Principles of Horseshoeing I – No book needed.

AGR 1263 Principles of Ag Economics – No book needed.

AGR 1273 Dairy and Poultry – Poultry Science. Larsen & Keller Educ, 2017. Campbell, John R., and Robert T. Marshall. Dairy Production and Processing: the Science of Milk and Milk Products. Waveland Press, Inc., 2016. ISBN-13: 978-1478611202

AGR 2013 Agricultural Communications – Ricky Telg and Tracy Irani; 2011; Agricultural Communications in Action: A Hands on Approach; Cengage Learning; ISBN10: 1111317143; ISBN13: 978-1111317140

AGR 2023 Principles of Equine Science – No book needed.

AGR 2044 Principles of Animal Reproduction – Senger, P.L., Pathways to Pregnancy and Parturition. 3rd ed., Current Conceptions Inc, 2015. ISBN-13: 978-0965764834

AGR 2055 Livestock Ultrasound Technology – No book needed.

AGR 2083 Agricultural Food Science – Rick Parker and Miriah Pace; 2016; Introduction to Food Science and Food Systems; Cengage Learning; ISBN-13: 978-1435489394; ISBN-10: 143548939X

AGR 2112 Advanced Meat Evaluation – Meat Evaluation Handbook. American Meat Science Association, 2001. ISBN-10: 0970437803

AGR 2203 Principles of Feeding –Animal Feeding and Nutrition, Ninth Edition, Marshall H. Jurgens. ISBN-13: 978-0757591136

AGR 2244 Plant Science – Preece, John E., and Paul E. Read. The Biology of Horticulture: an Introductory Textbook. Wiley, 2005. ISBN 978-0-471046579-9

AGR 2253 Farm and Ranch Management- Recommended: None

AGR 2273 Principles of Horseshoeing II – No book needed.

AGR 2323 Marketing of Ag Products- Recommended: Marketing Grain and Livestock, Gary F. Stasko.

3. **What methods of instruction are used to meet the goals and objectives of courses in the program/discipline? Please describe two different sample lessons used within different courses in the program.**

Many different methods of instructions are used to meet the programs goals and objectives. The following are common methods used in the department:

- Lecture
- Hands on laboratories
- Inquiry-based learning
- Class discussion
- Student presentations
- Debates
- Guest speakers
- Student research projects
- Real world scenarios and application
- Field study
- Mathematical equations
- Simulations

4. **How do you ensure appropriate academic rigor and consistency of course content in all modalities?**
   The instructors ensure appropriate academic rigor by constantly evaluating the curriculum, course outcomes and departmental outcomes being taught along with the data on student assessments. Curriculum is created by using these outcomes, communicating with other institutions and interacting with industry professionals. Instructors look at the local assessment scores to help gain insight as to how effective the lessons were presented. If a lesson needs to be revaluated based on abnormal assessment scores, the instructor will review the rigor of the content and make sure the lesson is in line with the outcomes. During this review, an instructor may find that additional lessons or a different method of instruction needs to be provided to the students to withhold the academic rigor of the program. This evaluation process takes place along all modalities.

D. Program Assessment:

1. **What are the program outcomes?**
   The program outcomes are:
   1. Demonstrate agricultural financial management, plant and animal production, and agri-marketing strategies.
   2. Calculate mathematical and quantitative calculations for analysis and problem solving within the agricultural industry.
   3. Communicate effectively in written and oral form.
   4. Develop and process concept of nature and the physical world in relationship to the agricultural industry.
   5. Analyze shared cultures, heritages in the fine and performing arts.

2. **What is the process for program and course level assessment?**
   The department is in the process of program assessment by conducting an academic program review. Instructors use course level assessments online at the end of each semester for different classes in the department such as Animal Science, Plant Science, Principles of Animal Reproduction and Dairy and Poultry. The assessment is based on the course level outcomes from the class syllabi. Benchmarks are set by the instructor, data is recorded on how the students scored on each benchmark and then the data is analyzed.

3. **What are the findings of outcomes assessment reports from the department since the last program review? (Program Compilation Summaries/Course Assessment Reports)**

   For CTE programs only:

   Program majors/Current concentrators

Majors: Farm and Ranch Management Associates of Applied Science, Farm and Ranch Management Certificate.

Current Concentrators:

2019- 18 Associate Degree

1 Certificate

2018- 17 Associate Degree

3 Certificate

2017- 15 Associate Degree

2 Certificate

Unduplicated prior 3 year graduates

2019- 18 Associate Degree

1 Certificate

2018- 17 Associate Degree

3 Certificate

2017- 15 Associate Degree

2 Certificate

4. **Please list any third party accreditation.**
   None

5. **List any additional needs for the program (facilities, personnel, technology, student support, etc.).**
   The program's instructional funds have been drastically cut over the last few years. This directly impacts the instructor's ability to provide a quality education for the students the program serves. An evaluation of funding needs to be conducted to ensure that adequate program materials can be purchased.

   The programs recruiting funds have been drastically cut over the last few years. Without the funds to travel and recruit, the enrollment of the program suffers. An evaluation of funds for recruiting needs to be conducted.

II. Institutional Support

A. Support:

1. **How does this program support other academic areas of the college and/or how is it supported by other academic areas?**
   The program supports other academic areas of the college by incorporating many of the general education outcomes into the classes offered. Many of the classes within the program indirectly teach writing, communication skills, technology skills, mathematics, critical thinking and ethical responsibility even though it may not be the main focus of the class. The cross curricular approach allows students to become further developed in those areas. The program is also supported by the same academic areas. Students who

are taking a math or English class will be able to perform at a higher level in the agricultural classes because they have had a foundation to work from.

2. **What learning resources are utilized for instruction and supporting the institutional outcomes?**
   The program uses many different resources to support the institutional outcomes. Instructors have students use writing, small group discussion, reading, class discussions and presentations in class to have students meet the communication outcome. Ethical responsibilities are debated in many different classes allowing students the ability to defend and justify the decisions they make. Mathematical concepts are covered in multiple courses through scenarios and real world examples. Instructors use technology such as ultrasound machines, microscopes, lab equipment, models and displays as well as computer programs to utilize technology in the classroom. Critical thinking skills are an everyday experience in the program. Students have the opportunity to identify agricultural issues, find supporting arguments and draw conclusions. All of these institutional outcomes are staples in the program furthering the well roundedness of the students that attend the institution.

B. Community Engagement:

1. **Please provide examples of how the program/discipline fosters relationships within the communities FSCC serves (community partnership, participation, advisory board, etc.)**
   The agricultural program fosters community relationships in many different ways:
   Local Experts – Instructors within the department strive to reach out to local experts in specific areas of agriculture to collaborate and stay up to date in that area. These individuals may also come into the classroom to give the students a live lesson.
   Advisory Board – The department aims to place reputable agriculturalists on the advisory board. It is currently made up of local high school agricultural teachers, self-employed individuals, retired teachers and

local agricultural experts in the area. All of these individuals care about the community, FSCC and the agricultural department.

Aggie Day – The Aggie Day contest held in the spring of each year makes numerous relationships within the community. The department hosts over 1400 students, teachers and advisors from the four state area. With the help of many community members, these students compete in twelve different areas of agriculture all in one day. Community relationships that stem from this event are; sponsorship from local veterinarian and animal reproduction facility, local experts that help run contests, livestock animals being used from many local farms, local 4H communication, local businesses and restaurants.

Meat Judging Team – The meat judging team practices at local grocery stores and meat processing facilities fostering relationships with many individuals in the area of meat science. The team also takes part in many community service activities such as a county "trunk-or-treat", cleaning the local fair grounds and picking up trash locally. All of these activities start with building relationships within the community.

Livestock Workouts and Contests – The livestock judging team frequently practices at local farms building relationships with individuals in the community. They also help provide officials for local 4H and FFA livestock judging contests that take place in the spring and summer.

AI Class – The cattle artificial insemination class fosters relationships with local beef producers and the Fort Scott Sale Barn to assure the class expectations are met.

Local FFA Events – The department helps host and/or officiate local FFA events thus fostering relationships with high school agricultural educators in the area.

C. Program Development:

1. What marketing/recruiting strategies are used by the program/discipline?

When time and funds allow, instructors in the department meet face to face with high school and prospective students giving information about what FSCC and the department has to offer in the flowing ways:

Visiting high school FFA chapters

Attending state and national FFA conventions

Attending college fairs
Aggie Days recruitment
Judging team recruitment

The department also utilizes Facebook as an online platform to promote and market the department.

Instructors within the department foster relationships with local agricultural educators as a means of recruiting by attending the Kansas Association of Agricultural Educators convention each year, visiting their local high schools and helping in FFA activities when applicable.

2. **How, and by what means, does the discipline use external professional and community resources to enhance discipline practices?**
   The department uses professional and community resources to enhance practices in the following ways:
   - Reaching out to local experts to visit classes, talk with student and share their knowledge.
   - Hands on experience at local –
     animal reproduction facilities (ReproLogix)
     veterinary facilities (Fort Scott Veterinary Center)
     beef producers (KW Cattle)
     sheep producers (Brillhart)
     swine producers (M&R Genetics)

   This face to face and hands on experience with local and community professionals allows students to receive additional in-depth experience the classroom alone cannot provide.

3. **Does the discipline have a means for students to assess the program outside of the official student evaluations? If so, explain.**
   Not at this time.

Program Action Plan: AGRICULTURE

Date: May 26th, 2021

An Action Plan addressing the findings is developed by the full-time faculty in the program, Vice President of Academic Affairs and Director of Institutional Effectiveness following the Program Review process. Progress and the outcomes of the Action Plan will be reported during next Program Review.

Action items based on Findings/Recommendations	Detailed Action Plan	Anticipated Completion Date	Resources Needed
1. Develop program evaluation for graduates.	Faculty will look at other institutions to get ideas for "exit" type evaluations. After researching, a tailored evaluation will be made for graduates of the program.	Research will take place during the fall of 2021. Development of the new evaluation tool will take place during the spring semester of 2022. First evaluations given to the May 2022 graduates.	Other institutions program evaluation tools, knowledge in different modalities, data collection center, student contact information

2. Grow enrollment and, in turn, graduation rates.	Faculty members will build relationships with the area school districts. This may include agriculture instructors, school counselors and administration. In school visits as well as virtual type modalities will be used to recruit students to the department. For schools outside of the local area, promotional materials can be mailed and virtual meetings with prospective students will take place.	This will be a revolving action item that will need to be continuously worked on. The program wants to see 10% growth by the next program review.	Updated promotional materials, time to visit area high schools, networking opportunities, funding for travel and recruitment
3. Program curriculum revision.	CA2 and CA2A forms will be filled out in the spring of 2021.	Changes will be made during the 2021 – 2022 school year. Curriculum changes will go into effect during the 2022 - 2023 school year.	Course catalog updates
4. Map course outcome to program outcomes.	Faculty will examine the program outcomes to see if they need revised. Once the program outcomes have been revised, mapping of the new course curriculum to the program outcomes can take place.	Changes will be made during the 2021 – 2022 school year. Mapping changes will go into effect during the 2022 - 2023 school year.	Course syllabi/outcomes, program outcomes, mapping template

Full Time Faculty Qualifications

Blake Davis
Texas Tech University- Bachelors in Animal Science
West Texas A&M University- Masters in Agriculture Education

Sara Sutton
Kansas State University – Bachelor of Science in Agriculture
Pittsburg State University – Bachelor of Science in Education
Pittsburg State University – Masters of Science in Educational Leadership
Swine Meat Quality Ultrasound Certification
Sheep Meat Quality Ultrasound Certification

Advising Degree Sheets

Program of Study: Farm and Ranch Management Associates of Applied Science

The purpose of the FSCC Farm and Ranch Management Associates of Applied Science degree is to provide students with the basic skills and knowledge needed in different sectors of the agriculture industry. The curriculum suggested is for students planning to enter an agricultural career upon completing the FSCC two-year program.

AGR 1053 Introduction to Computers in Agriculture..... 3
AGR 1204 Principles of Soil Science..... 4
AGR 1211 Agriculture Orientation 1
AGR 1243 Principles of Animal Science..... 3
AGR 1252 Animal Science & Industry..... 2
AGR 1263 Principles of Ag Economics..... 3
AGR 1273 Dairy & Poultry Science 3
AGR 2203 Principles of Feeding..... 3
AGR 2253 Farm and Ranch Management..... 3
AGR 2323 Marketing of Ag Products..... 3
ENG 1013 English 101 T►..... 3
ENG 1023 English 102 T►..... 3
PHE 2671 Lifetime Fitness..... 1
SPE 1093 Public Speaking T►..... 3
AGR Electives..... 10
AGR Math Elective..... 3
Intermediate Algebra, Business Math or higher..... 3
Social Science or Behavioral Elective 3
Physical/Biological Science 5
Total Hours.....62 hours

Program of Study: Farm and Ranch Certificate

The purpose of the FSCC Farm and Ranch Management Certificate is to provide students with the basic skills and knowledge needed in different sectors of the agriculture industry. The curriculum suggested is for students planning to enter an agricultural career upon completing the FSCC year long program.

AGR 1044 Agricultural Experience 4
AGR 1053 Introduction to Computers in Agriculture..... 3
AGR 1211 Agriculture Orientation 1
AGR 1243 Principles of Animal Science..... 3
AGR 1252 Animal Science & Industry..... 2
AGR 1263 Principles of Ag Economics..... 3
AGR 2043 Agriculture Technology Management..... 3
AGR 2253 Farm and Ranch Management..... 3
AGR 2323 Marketing of Ag Products..... 3
BUS 1013 Principles of Accounting I..... 3
BUS 2013 Financial Accounting T►..... 3
AGR Electives..... 7
Total Hours.....38 hours

Degree Audit Courses

Farm and Ranch Associates of Applied Science

	T - Tier N - Non-Tier	Course (ID) Title	Credit Hours
4	N	(AGR1211) AG ORIENTATION	1
8	T	(AGR1252) ANIMAL SCIENCE AND INDUSTRY	2
11	T	(AGR1273) DAIRY AND POULTRY SCIENCE	3
341	N	(ENG1013) ENGLISH 101	3
342	N	(ENG1023) ENGLISH 102	3
26	T	(AGR2253) FARM AND RANCH MANAGEMENT	3
2	N	(AGR1053) INTRODUCTION TO COMPUTERS IN AGRICULTURE	3
777	N	(PHE2671) LIFETIME FITNESS CONCEPTS	1
29	T	(AGR2323) MARKETING OF AG PRODUCTS	3
10	N	(AGR1263) PRINCIPLES OF AG ECONOMICS	3
7	T	(AGR1243) PRINCIPLES OF ANIMAL SCIENCE	3
19	T	(AGR2203) PRINCIPLES OF FEEDING	3
3	T	(AGR1204) PRINCIPLES OF SOIL SCIENCE	4
882	N	(SPE1093) PUBLIC SPEAKING	3
7		(AGR MATH) AGR MATH	3
69		(AGR ELEC) AGRICULTURE ELECTIVES	10
3		(ART/HUM) ARTS & HUMANITIES	3
4		(SCIENCE) PHYSICAL OR BIOLOGICAL SCIENCE	5
2		(SOC) SOCIAL SCIENCE OR BEHAVIORAL	3

Farm and Ranch Certificate

	T - Tier N - Non-Tier	Course (ID) Title	Credit Hours	
4	N	(AGR1211) AG ORIENTATION	1	C
989	T	(AGR1044) AGRICULTURAL EXPERIENCE	4	C
954	T	(AGR2043) AGRICULTURE TECHNOLOGY MANAGEMENT	3	C
8	T	(AGR1252) ANIMAL SCIENCE AND INDUSTRY	2	C
26	T	(AGR2253) FARM AND RANCH MANAGEMENT	3	C
1518	T	(BUS2013) FINANCIAL ACCOUNTING	3	C
2	N	(AGR1053) INTRODUCTION TO COMPUTERS IN AGRICULTURE	3	C
29	T	(AGR2323) MARKETING OF AG PRODUCTS	3	C
126	T	(BUS1013) PRINCIPLES OF ACCOUNTING I	3	C
10	N	(AGR1263) PRINCIPLES OF AG ECONOMICS	3	C
7	T	(AGR1243) PRINCIPLES OF ANIMAL SCIENCE	3	C
64		(AGR A) AGR ANIMAL	3	B
65		(AGR PL) AGR PLANT	4	B

Lesson Plan Samples

AGR 2323 Marketing of Ag Products - Conduct a 15 minute "Business Meeting" in front of the class in which they develop a new agriculture product from idea generation to commercialization.

AGR 2203 Principles of Feeding –
Lesson: Feed Specialist Scenario

Objectives:

Evaluate the needs of a beef producer in a given scenario.
Calculate feed rations based on Pearson's square mathematical computations to fit the producer's needs.
Calculate cost per head.
Analyze the calculations to determine if they are the best fit for the scenario.
Create feed recommendations for the producer in the scenario.

Departmental Goals Observed in the Lesson:
#2: Calculate mathematical and quantitative calculations for analysis and problem solving within the agricultural industry.
#3: Communicate effectively in written and oral form.

General Education Outcomes Observed in the Lesson:
Mathematical, communication, technology skills and critical thinking.

Description of the Lesson:
Students will be given a beef producer scenario sheet. In the scenario, the student is a feed specialist that is being hired to formulate rations for the producer. The producer explains what the goals and desired outcome of his operation and wants the feed specialist to create the optimum ration for maximized production. Students must create at least 3 ration options for the producer to use.

Based on previous lessons, students will use their knowledge to create a presentation that explains the following: What are the needs and goals of the producer? What feedstuffs are readily available to the producer? What rations are you recommending the producer use and why? How did you come to this conclusion? Will the new ration have an impact on the producers cost? Other recommendations you have as a feed specialist for the producer?

Students will put their recommendations into a presentation format. They will present the information to the class as if the class is the producer they have been hired to help and thoroughly explain their reasoning.

Students will turn in both the presentation and all mathematical calculations to be evaluated for their final grade over the lesson.