College of Education
Dean's Office Memorandum

DATE: August 26, 2016

TO: Dr. Kate Miller, Provost
Cc Dr. Anne Alexander, Associate Provost

FROM: D. Ray Reutzel, Dean

RE: Agricultural Education Program Review

After reviewing the data presented in the Program Review Report as per University regulation, I am providing you a memorandum of recommendation related to the above named degree program, Agricultural Education. The program housed on the Laramie campus has had a history of low productivity in terms of the number of degrees awarded.

The Agricultural Education (Ag Ed) program has no national specialized program accreditation (SPA) body, but is approved by the *Wyoming Professional Standards Teaching Board* (PTSB) making the degrees awarded eligible for professional licensure, certification or endorsement in Wyoming. Consequently, the Agricultural Education program meets state accreditation standards as a program recognized with conditions. Conditions of the program will be addressed in future PTSB accreditation cycles.

The Ag Ed program at UW has a fine reputation for quality in the state of Wyoming and beyond. Moreover, UW is the only instate degree in Ag Ed, an area of the Wyoming economy that is currently among the top three economic drivers in the state of Wyoming. The Ag Ed program is integrally involved in agricultural education programs, clubs, competitions, etc., in Wyoming high schools. In fact, UW serves as a statewide hub for many Ag Ed related groups, clubs, and competitions.

Despite the need for Ag Ed teachers in the state of Wyoming and in other surrounding states, the major in agricultural education has been undersubscribed for many years now. Direct instructional expenditures are among the highest in the College of Education and course enrollments are perennially below university course enrollment standards. Agricultural Education is considered mission central due to the nature of a land grant university mission and its relation to a state that is highly invested in agriculture as part of the state's economy. Any attempt to remove Ag Ed from the university's suite of degree offerings is likely to meet the stiffest of opposition and would likely not be worth the cost to the university's reputation with a key constituency of UW- Wyoming's farmers and ranchers.

My recommendation is to retain the Ag Ed program due to critical need in Wyoming but investigate moving this degree to a concurrent major in agriculture with the College of Agricultural and Applied Sciences, develop a vigorous recruitment and enrollment management plan, consider

a rolling two year cohort admissions and program delivery model, and create 2+2 articulation agreements with Wyoming's seven community colleges to smooth transfer students' entering and completing this program in a timely manner.

DRR

Academic Program Review
Report Template
University of Wyoming
Office of Academic Affairs
March 2016
Submitted: August 26, 2016

(adapted from SDSU)

Deans and Directors who administer an authorized major or course of study approved by action of the Board of Trustees will be responsible for conducting program reviews. Four key elements should be addressed in each academic program review: (1) Program Demand, (2) Program Quality, (3) Mission Centrality, and (4) Cost.

For each program that is reviewed, a recommendation will be made by the Academic Dean to the Vice President of Academic Affairs.

Instructions: *Please provide the following information:*

Title of Program/Specialization: Agricultural Education
Indicate whether undergraduate or graduate program/specialization: Undergraduate
Department and College: Secondary Education; College of Education
Department Head Name and contact information (phone, email): Dr. Kate Muir Welsh
(307) 766-2013
kmuir@uwyo.edu

Part 1 – Program Review

Instructions: *Please answer each of the following questions. Items listed under each question have been provided to help guide your response. If an item is not applicable, simply indicate "N/A".*

1. **Program Demand*:**

Agricultural Education is an undergraduate program only with student teachers enrolled in methods classes in the Fall Semester and completing their residency/student teaching experience in the Spring semester. Over the course of a five–year period, the Agricultural Education program fails to achieve minimal productivity standards (n=10 degree graduates per year, 50 graduates over five years) qualifying it for Stage 2 Academic Program Review. Program graduates are distributed as follows.

2017 – 2 Graduates (Estimated)
2016 – 3 Graduates
2015 – 7 Graduates
2014 – 6 Graduates
2013 – 9 Graduates
2012 – 5 Graduates; 2 post baccalaureates

2. **Program Quality: Is the program of high quality?**
    a. Program accreditation

        1. The Wyoming Professional Teaching Standards Board (PTSB) is the agency responsible for licensure and endorsement of the Agricultural Education graduates for the state of Wyoming.

        2. The most recent PTSB accreditation process was completed and approved in the June 15–16, 2015 Wyoming Professional Teaching Standards Board (PTSB), as recommended by the Program Review Committee. According to the PTSB, the Agriculture Education Program (B.S. leading to initial educator licensure) is approved through the semester and year of the institution's next CAEP accreditation decision in 2023. To retain approval, another program report shall be submitted mid-cycle (2020) before the next scheduled accreditation visit (2023).

        3. The program will follow the accreditation cycle of the College of Education national accreditation which will occur again in seven years (2023).

        4. List recommendations from most recent visit and progress to date.

There are seven **Wyoming PTSB Standards in the Agriculture 6–12endorsement area**. In the most current PTSB (2015) evaluation, five were met with no concerns, while two were met with conditions:

Program Standards Met with Conditions:

Standard 3: Knowledge and skills necessary for establishing and supervising youth organizations that prepare students for leadership, personal growth, and career success.

Comments/Rating Explanations:

Nowhere in the midterm or final does it demonstrate or mention teacher candidate involvement in FFA or SAE, which are two out of the three parts of the Agricultural Education Model. There are no classes required that specifically teach FFA theory/methods or SAE theory/methods.

It is unclear whether students become familiar and well-versed on Ag Ed Tracker (AET), Wyoming's SAE Record Keeping and Awards Application, or familiar with National FFA Roster Program. It is critical to have awareness of these programs prior to starting student teaching.

Condition: Students must be trained more on the current record keeping systems (AET and AgCn). The program needs to assess their candidates in the use of these types of record keeping systems.

Response:

The Agricultural Education Methods and Residency experience coursework

EDSE 3278 – Subject Matter Specific Methods I: Secondary Agricultural Education
EDSE 4278 – Subject Matter Specific Methods II: Secondary Agricultural Education
EDSE 4500 – Residency in Teaching

all offer experiences and opportunities for pre-service teachers designed to satisfy the above concerns. Guest lecturers provide experiences for students in these areas. Mr. Brock Burch, Agriculture teacher from Natrona County schools, provides a hands-on

workshop during the methods classes targeting the Ag Ed Tracker (AET), its use, and opportunities for student achievement.
Mrs. Stacy Broda, Wyoming State FFA Advisor, provides a hands-on training opportunity for the pre-service teachers regarding the Wyoming SAE Records Keeping and Award Application, as well as the National FFA Roster Program.
In the above comments from the reviewers, *nowhere in the midterm or final does it demonstrate or mention teacher candidate involvement in FFA or SAE, which are two out of the three parts of the Agricultural Education Model. There are no classes required that specifically teach FFA theory/methods or SAE theory/methods.* FFA, and SAE theory instruction is included in the EDSE 3278 and 4278 curricula. Although time allocation prevents considerable detail, students are exposed to the theory, and have an opportunity to practice the principles in the field, during the EDSE 4500 Residency Experience. In the previous statement, EDAG 3160 – Principles of Agricultural Education, which was eliminated prior to the Fall of 2011, included course theory specifically targeting these areas and PTSB concerns could feasibly be addressed with the continuation of this course in a more modern format.

Standard 4: Knowledge and skills necessary for planning, promoting, organizing, and administering supervised agricultural experience programs outside the classroom.

Comments/Rating Explanations:

Nowhere in the midterm or final does it demonstrate or mention teacher candidate involvement in FFA or SAE, which are two out of the three parts of the Agricultural Education Model. There are no classes required that specifically teach FFA theory/methods or SAE theory/methods.
The committee was unsure how students meet these criteria, especially if they were not a former FFA member.
Condition: Program must provide more specific evidence (such as providing documentation of the required SAE visits) to show that candidates have sufficient knowledge and skills to meet this standard. Teacher candidates must understand the importance of SAE requirements on top of their regular teaching responsibilities in order for them to successfully facilitate supervised agricultural experience programs outside the classroom.

Response:

The comments in this section directly relate to standard 3, and the comments identified there. As in the previous standard and concern, the Agricultural Education Methods and Residency experience coursework
EDSE 3278 – Subject Matter Specific Methods I: Secondary Agricultural Education
EDSE 4278 – Subject Matter Specific Methods II: Secondary Agricultural Education
EDSE 4500 – Residency in Teaching
all offer experiences and opportunities for pre-service teachers designed to satisfy the above concerns. Although time allocation prevents considerable detail, students are exposed to the theory, and have an opportunity to practice the principles in the field, during the EDSE 4500 Residency Experience. Opportunities to gain experience in Supervised Agricultural Experience (SAE) programs and FFA activities are available and required in EDSE 4500. The following description from the syllabus in EDSE 4500 includes specific assignments developed to meet those experiences.

SAE Visits

Make a minimum of 5 home and/or work site visits of students' SAEs with your cooperating teacher. Observe the cooperating teacher's supervisory techniques and interaction with the student and his/her family and/or employer. Record all SAE visits in the appropriate weekly report. Be certain to identify the type(s) of SAEs supervised and provide some brief comments about their general conditions and your recommendations.

Prepare a Career Development Event (CDE) Team

CDE team activities are an important part of FFA and a significant learning tool for agricultural education students. For this assignment, you are to prepare (or substantially assist in preparing) a CDE team to compete in an event above the local level. Consultation with your mentor teacher should result in a CDE area suitable for the program that you are a part of, and should be one **that you are not** proficient in. **Discuss your plans regarding this assignment with your university supervisor during the first supervisory visit.** A report **(~one, type-written page)** describing your experiences (including a photo or two, if available) should be included in your resource file.

FFA Activities

This will be an easy one. **In your role as an FFA Advisor, you are to attend and supervise students at least three FFA activities above the local level.** Appropriate activities could include state or national conventions, leadership conferences, CDEs, or other FFA activities. **A record of the activities in which you participate should appear in your weekly reports.**

In the previous statement, EDAG 3160 – Principles of Agricultural Education, which was eliminated prior to the Fall of 2011, included course theory specifically targeting these areas and PTSB concerns could feasibly be addressed with the continuation of this course in a more modern format.

b. **Credentials of faculty**

Dr. J. Chris Haynes Ph.D., Agricultural Education Communication and Leadership, Oklahoma State University

Gender – Male; Ethnicity – White Caucasian

Grants awarded to academic personnel: Previous 5 years

RESEARCH, GRANTSMANSHIP, AND EXTRAMURAL FUNDING EXPERIENCE

(2015) Proposal to the Ellbogen College of Education Dean's Excellence grant for funding to upgrade the agricultural education "Ag Mech" program at the University of Wyoming to one targeting the Ideal Post-Secondary Applied STEM (Agricultural Mechanics) learning laboratory. **Haynes, J. C.** , February 2015, (Requested funding; $90,000. Funded, March 2015).

(2011) Robotics for the 21st Century. Math Science Partnership (MSP) Proposal for professional development program for Wyoming K-12 teachers. Principle investigators include Slater,T., Dale, D., **Haynes, J.C.**, & Burrows, A. May 2012 – September 2013, (Requested funding; $207,156. Funded, February 2012).

(2010) "Post–test" Science Achievement Examination and Evaluation.

Grant Co–Writer, National Research Center for Career and Technical Education (NRCCTE) Dissertation assistance funds. Funding requested for "post–test" science achievement examination and evaluation to be used for dissertation study. **(Requested funding; 80 students x $12.00 = $960.00. Funded)** Principle investigators include: **Haynes, J. C.** & Robinson, J. S. **(2010)**

Publications/presentations by academic personnel

Peer–Reviewed Research Journal Articles

Blackburn, J. J., Bunch, J. C., & **Haynes, J. C.** (2016). Assessing the relationship of teacher self-efficacy, job satisfaction, and perception of work-life balance of Louisiana agriculture teachers. *Journal of Agricultural Education* (Accepted for Publication).

Gillis, V., Jones-Moore, L., **Haynes, J. C**., & Van Wig, A. (2016). Let's not forget the career in college and career ready. *Journal of Adolescent & Adult Literacy, 59*(6), 637–641. doi:10.1002/jaal.517

Chumbley, S. B., **Haynes, J. C.,** & Stofer, K. (2015). A measure of students' motivation to learn science through agricultural STEM emphasis. *Journal of Agricultural Education, 56*(4), 107–122. doi: 10.5032/jae.2015.04107

*** Awarded Journal of Agricultural Education Outstanding Article – Volume 56**

Kock, T. K., **Haynes, J. C.,** & Smith, J. O. (2015). A year after it started: The benefits of the Iraqi 4-H program – A view from the youth, parents, and volunteer leaders of the Dar Al Salaam 4-H club. *Journal of International Agricultural and Extension Education, 22*(2), 52–61.

Haynes, J.C., Gill, B.E., Chumbley, S.B. & Slater, T.F. (2014). A cross-case comparison of the academic integration human capital pre-service agricultural educators retain prior to their teaching internship. *Journal of Agricultural Education, 55*(5), 191-206. doi: 10.5032/jae.2014.05191

Haynes, J.C. & Stripling, C.T. (2014). Mathematics efficacy and professional development needs of Wyoming agricultural education teachers. *Journal of Agricultural Education, 55*(5), 48-64. doi: 10.5032/jae.2014.05048

Burrows, A. C., Borowczak, M., Slater, T. F., & **Haynes, J. C.** (2012). Teaching computer science through engineering simple robotics: Strict science or art form? *Problems of Education in the 21st Century, 47*(47), 6 –15.

Haynes, J. C., Robinson, J. S., Edwards, M. C., & Key, J. P. (2012). Assessing the effect of using a science-enhanced curriculum to improve agriculture students' science scores: A causal comparative study. *Journal of Agricultural Education, 53*(2), 15 – 27. doi: 10.5032/jae.2012.02015

Robinson, J. S., & **Haynes, J. C.** (2011). Values and expectations of supervised agricultural experiences as expressed by agriculture instructors in Oklahoma who were alternatively certified. *Journal of Agricultural Education, 52*(2), 47 – 57. doi: 10.5032/jae.2011.02047

Robinson, J. S., Krysher, S., **Haynes, J. C.**, & Edwards, M. C. (2010). How Oklahoma State University students spent their time student teaching in agricultural education: A fall versus spring semester comparison with implications for teacher education. *Journal of Agricultural Education, 51*(4), 142 – 153. doi: 10.5032/jae.2010.04142

Papers in Progress (Preparation for Submission)

Haynes, J. C., Robinson, J. S., Edwards, M. C., & Key, J. P. (XXXX). Determining the effect of a science-enhanced curriculum on agricultural content knowledge: A causal comparative study. *Journal of Agricultural Education,* (Preparing for submission, estimated Summer 2016)

Gill, B.E. & **Haynes, J.C.** (XXXX). Comparing paths followed by agricultural education teachers when learning to implement academic integration: A comparative multi-case study. *Journal of Agricultural Education,* (Preparing for submission, estimated Summer 2016)

National/International Presentations and Papers – Refereed Proceedings

Research Conference Presentations

Blackburn, J. J., Bunch, J. C., & **Haynes, J. C.** (2016). Assessing the relationship of teacher self-efficacy, job satisfaction, and perception of work-life balance of Louisiana agriculture teachers. *2016 AAAE National Research Conference, May, 17 –20, 2016, Kansas City, MO.*

Gill, B. E., & **Haynes, J. C.** (2015). STEM enhanced lessons in agricultural mechanics: Sparking creative inquiry. *2015 NAAE Professional Development Workshop, November 17-21, 2015, New Orleans, LA.*

Chumbley, S. B., **Haynes, J. C.,** & Stofer, K. (2015). A measure of students' motivation to learn science through agricultural STEM integration. *2015 AAAE National Research Conference, May, 19 –22, 2015, San Antonio, TX.*

Kock, T. K., **Haynes, J. C.**, Slater, T. F., & Smith, J. (2015). An assessment of the AGNR faculty ambitions for international leadership opportunities. *2015 "Competence and Excellence in Extension and Education" Association for International Agricultural and Extension Education (AIAEE) 31st Annual Conference, April 27 – May 1, 2015, Wageningen, The Netherlands*.

Haynes, J. C., Gill, B. E., & Anderson, R. G. (2015). Utilizing a Delphi study to establish the teaching resources needed for an ideal post-secondary applied stem (agricultural mechanics) learning laboratory. *2015 NARST Annual International Conference, April 11–14, 2015, Chicago, Il, USA.*

Stork, D., Slater, S. J., Slater, T. F. & **Haynes, J. C.** (2015). A modern measurement of K-12 teachers understanding of NGSS astronomy concepts. *2015 International Conference of the Association of Science Teacher Educators, January 8, 2015, Portland, OR.*

Gill, B. E., & **Haynes, J. C.** (2014). Fusing together science and agriculture: Ideas for STEM enhanced lessons in agricultural mechanics. *2014 NAAE Professional Development Workshop, November 18-22, 2014, Nashville, TN.*

Haynes, J. C., Gill, B. E., Chumbley, S. B. & Slater, T. F. (2013). Uncovering academic emphasis through agricultural education: Knowledge of pre-service teachers in STEM integration – A cross-case comparison of three agricultural education pre-service teacher education programs. *2013 AAAE National Research Conference, May, 21–24, 2013, Columbus, OH.*

Gill, B. E., & **Haynes, J. C.** (2012). Fusing together science and agriculture: Ideas for STEM enhanced lessons in agricultural mechanics. *2012 NAAE Professional Development Workshop, November 27-December 1, 2012, Atlanta, GA.*

Haynes, J. C., Robinson, J. S., Edwards, M. C., & Key, J. P. (2012). Determining the effect of a science-enhanced curriculum on agricultural content knowledge: A causal comparative study. *2012 AAAE National Conference, May 15-18, 2012, Asheville, NC.*

Gill, B. E., & **Haynes, J. C.** (2011). Sawing out of your box: The development and use of STEM integrated lessons in agricultural mechanics. *2011 NAAE Professional Development Workshop, November 15-19, 2011, St. Louis, MO.*

Haynes, J. C., Robinson, J. S., Edwards, M. C., & Key, J. P. (2010). Determining the effect of a science-enhanced curriculum taught in an animal science or horticulture course on student science achievement: A causal comparative study. *2011 AAAE National Conference, May 24 -27, 2011, Coeur d' Alene, ID.*

Robinson, J. S., & **Haynes, J. C.** (2010). The values and expectations alternatively certified agricultural education teachers place on the supervised agricultural experience program: A qualitative study. *2010 AAAE Research Conference*, May 24–28, 2010, *Omaha, NE*.

Poster Presentations

Haynes, J. C., Anderson, R. G., Mccubbins, O. P., & Gill, B. E. (2015). Utilizing a Delphi study to establish the teaching resources needed for an ideal post-secondary applied STEM (agricultural mechanics) learning laboratory. *2015 National Agricultural Mechanics Professional Development Blue Ribbon Poster Session,* Oct. 28th, 2015, Louisville, KY
*** Awarded Distinguished Research Award**

Haynes, J. C., Whisenhunt, J. H., Bunch, J. C., Edwards, M. C., & Robinson, J. S. (2010). Implementing the integration of stem curriculum in agricultural education: Implications for pre–service teacher education. 2010 *American Association for Agricultural Education (AAAE) Research Conference*, May 24–28, 2010, Omaha, NE.
***Awarded Second Runner–up Innovative Idea Poster Presentation**

Bunch, J. C., **Haynes, J. C.**, Ramsey, J. W., Edwards, M. C., & Robertson, T. (2010). Making learning meaningful for the millennials: Podcasting with a purpose in agricultural education. 2010 *American Association for Agricultural Education (AAAE) Research Conference,* May 24–28, 2010, Omaha, NE.

National/International awards

Awarded the Journal of Agricultural Education Outstanding Article – Volume 56 for the journal article "A Measure of Students' Motivation to Learn Science through Agricultural STEM Emphasis" at the 2016 *American Association for Agricultural Education (AAAE) Research Conference*, May 17–20, 2016, Kansas City, MO.

Awarded the Distinguished Research Award for the manuscript "Utilizing a Delphi study to establish the teaching resources needed for an ideal post-secondary applied STEM (agricultural mechanics) learning laboratory" at the 2015 National Agricultural Mechanics Professional Development Blue Ribbon Poster Session, Oct. 28th, 2015, Louisville, KY.

Other

Awarded the University of Wyoming "Top Professor" award by the University Cap and Gown Chapter of Mortar Board. Fall 2013.

Awarded the 2012-2014 Mary Garland Early Career Fellowship, ($20,000.00) for the research entitled "Self Efficacy of Agricultural Education and Science Education Pre-service Teacher Knowledge with Regard to Science, Technology, Engineering, and Mathematics (STEM)". University of Wyoming, College of Education, 2012.

c. Program Reputation

Agricultural Education is well known for the quality of graduates that the program produces. While most of the graduates pursue educational opportunities on the secondary and post-secondary level, other career areas also exist for agricultural education majors. With a degree background that includes communications, leadership, and human relations all in the context of agriculture, our graduates are employed in every field imaginable, from government positions, to business and industry. Agricultural education majors are taught to become problem solvers, leaders, entrepreneurs, as well as agriculturists through a well-rounded education designed to prepare them for the future.

The University of Wyoming is the only degree granting institution in Wyoming for future teachers seeking certification in Agricultural Education. Constant inquiries exist for our graduates from states seeking teachers, not only in the Western region of the United States, but also in the central and eastern regions to fill vacancies in their states. The program has a reputation of providing not only qualified teachers in Wyoming and the United States, but also for providing professional development opportunities designed to serve agriculture teachers in the state and their students.

Every Fall, the University of Wyoming chapter of Alpha Tau Alpha, a National Professional Honorary Agricultural Education Organization for Agricultural Education majors, develops and hosts the "Cowboy Classic". This invitational competition for secondary agriculture students includes Livestock Evaluation, Meats Evaluation, Agricultural Technology and Mechanical Systems, Prepared and Extemporaneous speaking, and Parliamentary Procedure, events all designed to develop leadership as well as social constructivist skills necessary for educational development. These competitions bring on average 250 – 300 potential future UW graduates to the community. Additionally, every spring, the Agricultural Education program additionally develops and hosts the state competition for the Agricultural Technology and Mechanical Systems event, which is the final competition to determine which schools will represent Wyoming at the National FFA event.

d. Curriculum of Major or Specialization

University of Wyoming Agricultural Education majors enter the program as Juniors upon completion of an associate's degree from various Junior colleges across the state and nationally. Additionally, a number enroll at UW as Freshman, completing all of their educational requirements here. Students have an opportunity to complete the requirements for a Bachelor of Science in Agricultural Education with one of six different areas of concentration; Animal and Veterinary Science, Agricultural Business, Rangeland Ecology & Watershed management., Soil Science, Agroecology, and Ag Communication and Leadership. Additionally, students are afforded the opportunity to

add an endorsement in Secondary Biology Education with an additional 10 – 11 hours of coursework. Once completed the Agricultural Education Bachelor's degree leads to certification to teach in the state of Wyoming by the Wyoming Professional Teaching Standards Board.

Courses specific to the major and specializations are as follows:

Course Number		Name		Credit Hours
Professional Education Requirements				
EDST	2450	Foundations of Development & Learning		3
ITEC	2360	Teaching with Technology		3
EDST	2480	Diversity & Politics of Schooling		4
EDEX	2484	Introduction to Special Education		3
EDST	3000	Teacher as Practitioner		6
EDST	3550	Educational Assessment		2
EDSE	3278	Agricultural Education Methods 1		3
EDSE	4278	Agricultural Education Methods 2		4
EDSE	4500	Residency in Teaching		15–16
Ag & Natural Resources Core Requirement				
AGEC	1010 or 1020	Principles of Macro Principles of Micro		3 3
AECL	1000	Agroecology		4
SOIL	2010	Intro to Soil Science		4
REWM	2000	Principles of Rangeland Management		3
ANSC	1010	Livestock Production		4
ANSC	2020	Feeds and Feeding		4
PLNT	2025	Horticultural Science		3
LIFE	1010	General Biology		4
LIFE	2022 or 2023	Animal Biology Plant and Fungal Biology		4 4
CHEM	1000	Intro to Chemistry		4
LIFE	3400	General Ecology		3
EDAG	4170	Principles of Agricultural Mechanics & Technology		3
EDAG	4180	Techniques of Agricultural Mechanics & Technology		3
Areas of Concentration				
Animal and Veterinary Science				
ANSC	3100	Principles of Animal Nutrition		3
ANSC	3010	Comparative Anatomy/Physiology of Domestic Animals		4

FDSC	2040	Principles of Meat Animal Evaluation		3
Choose one of the following				
ANSC	4120	Principles of Mammalian Reproduction		3
ANSC	4540	Principles of Animal Breeding		3
FDSC	3060	Principles of Meat Science		3
PATB	4110	Diseases of Food Animals and Horses		3
Upper Division Elective				3
Agricultural Business				
AGEC	1010 or 1020	Choose the additional economics course Principles of Macro Principles of Micro		 3 3
AGEC	4050	Agribusiness Marketing		3
AGEC	4060	Agribusiness Management		3
Upper Division AGEC Elective				3
Upper Division Elective				3
Rangeland Ecology and Watershed Management				
REWM	2500	Rangeland Plant ID		2
REWM	3020	Nutritional Management Grazing Ungulates		3
REWM	4530	Seminar		1
REWM	4700	Wildlife Watershed Management		3
Upper Division REWM Elective				3
Upper Division Elective				3
Soil Science				
SOIL	4120	Genesis, Morphology, & Class of Soils		3
SOIL	4150	Forest and Range Soils		3
SOIL	4160	Soil Fertility and Fertilizers		3
Upper Division Soil Elective				3
Upper Division Elective				3
Agroecology				
AECL	2026	Horticultural Science Lab		1
AECL	3030	Ecology Web: Ecology of Plant Protection		3
Upper Division ENTO/PLNT/SOIL Elective				4
Upper Division ENTO/PLNT/SOIL Elective				4
Upper Division Elective				3
Ag Communication and Leadership				

COJO	2010	Public Speaking		3
COJO	1040	Intro to Human Communication		3
Upper Division COJO/Leadership Elective				3
Upper Division COJO/Leadership Elective				3
Upper Division Elective				3
Secondary Education Biology Endorsement				
MICR/MOLB	2021	General Microbiology		4
LIFE or LIFE	3050 3500	Genetics Evolutionary Biology		4 3
EDSE	4279	Biology Methods for AGED		3
For Ag. Communication and Ag Buss AOCs – Upper Division Biology Elective				3

e. Distance delivery of program/major

Agricultural Education is an on-site program offered only at UW–Laramie

f. Quality of Assessment Plan/data

Agricultural Education Program Assessment follows the process of all programs within the Wyoming Teacher Education Program (WTEP). All Secondary Education Department programs have Tier 1 status on UW assessment of student learning in the WTEP programs, student teaching evaluations, as well as common assessments to determine student abilities.

g. Strategic Plan: N/A

h. Other

Agricultural Education students at the University of Wyoming are actively involved with statewide activities in Wyoming, in support of the Wyoming State FFA Association. Every Fall, the University of Wyoming chapter of Alpha Tau Alpha, a National Professional Honorary Agricultural Education Organization for Agricultural Education majors, develops and hosts the "Cowboy Classic". This invitational competition for secondary agriculture students includes Livestock Evaluation, Meats Evaluation, Agricultural Technology and Mechanical Systems, Prepared and Extemporaneous speaking, and Parliamentary Procedure, events all designed to develop leadership as well as social constructivist skills necessary for educational development. These competitions bring on average 250 – 300 potential future UW graduates to the community. Additionally, every spring, the Agricultural Education program additionally develops and hosts the state competition for the Agricultural Technology and Mechanical Systems

event, which is the final competition to determine which schools will represent Wyoming at the National FFA event, as well as participate in the Wyoming State Agriscience Fair, serving as evaluators for the manuscript component of the competition.

3. Mission Centrality: Does the program advance the mission of UW including institutional strategy?

a. Describe how the program supports the mission, vision and strategic goals of UW.

The Agricultural Education program aligns well with the mission of the University in the respect to UW's commitment to outreach and service. In addition to providing professional development to Wyoming teachers, and their students, future agriculture educators have the opportunity to put their learning into real life applications, better preparing them for a future in education. The University of Wyoming Agricultural Education program has a reputation for preparing future teachers not only for Wyoming, but for other states as well. The mission states there is an understanding that the greatest service is to provide the state and nation with teachers. This is also recognized as one of the mission's guiding principles when it comes to serving the needs of the state. As a land grant institution, Agricultural Education is instrumental for our state and its students.

b. Describe how the program contributes to other programs across campus (i.e., general education courses, minor or support courses, interdisciplinary program, etc.)

The Agricultural education program contributes to other programs across campus, not only in the College of Education, where students take basic core educational classes required by the program plan (i.e., EDST2450 -Foundations of Development & Learning; ITEC 2360- Teaching with Technology; EDST 2480 – Diversity & Politics of Schooling; EDEX-2484 Introduction to Special Education; EDST 3000 – Teacher as Practitioner; and EDST 3550 –Educational Assessment, but also courses in other Colleges, where students have the opportunity to work towards a dual major in subject areas that contribute value to a teaching content area, such as Animal and Veterinary Science, Agricultural Business, Rangeland Ecology & Watershed management., Soil Science, Agroecology, and Ag Communication and Leadership among others.

c. Include placement data for graduates and indicate if graduates are working in the field or not.

The agricultural education program produces future educators that are sought for and employed not only in the state of Wyoming, but in other states as well. UW has produced agriculture educators that are currently teaching in Wyoming, Colorado, Nebraska, Idaho, South Dakota, and Georgia. Every year states seeking agriculture educators contact the University of Wyoming for graduates to teach in their state. From 2012 – 2016, the agricultural education program has produced 32 graduates, with 21 graduates (65.6%) actively teaching (59.3% Agricultural Education; .06% Other Subjects); four graduates (13%) enrolled in graduate school; two (.06%)

receiving commissions in the Military, with the intent of teaching upon completion of their commitment to the Military; and five graduates (16%) currently unknown.

d. Describe the uniqueness or duplication of this program across the UW.

The Agricultural Education program at the University of Wyoming is unique, in that it is the only AGED degree program in the state leading directly to teacher certification. The majority of students' complete basics leading to the program from junior colleges in and out of the state, with a number enrolling in the program as Freshman at UW.

e. Other:

There are 57 agriculture educators in the state of Wyoming placed in 54 programs, which comprises 81.8% of the public (66) traditional schools, (i.e., those schools not classified as Carnegie, Alternative, or Private Schools) educating students at the 7-12 grade level. Of those 57 teachers identified, 37 (64.9%) received their pedagogical training in the University of Wyoming Agricultural Education program, providing an educational resource back to the state in which they were trained. In a state where tourism, agriculture, and energy extraction are the principal economic drivers, the contribution by the Agricultural Education program is considerable to the economy of Wyoming.

4. Cost: Is the program financially viable?

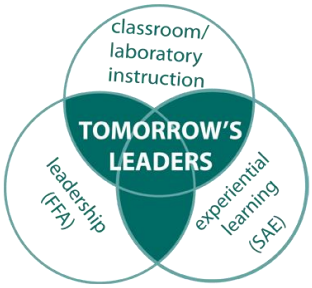
Dr. Haynes 2015-16 salary is $65,016. Benefits are not included in the calculations below. In 2015-16, Dr. Haynes taught the following four courses

Semester	Course #	Credits	# of Students	Total student credit hours
Fall 2015	EDSE 3278 – Subject Matter Specific Methods I: Secondary Agricultural Education	3	3	9
	EDSE 4278 – Subject Matter Specific Methods II: Secondary Agricultural Education	3	3	9
	EDAG 4180 – Techniques of Agricultural Mechanics and Technology	3	11	33
Spring 2016	EDSE 4500- Student Teaching Residency (Faculty act as supervisors for 10 students. • Students enroll for 15-16 credit hours. • The faculty receive 5	5	10	50

	credits in their teaching load for EDSE 4500.)			
		Totals	27	101

a. **Ratio of student credit hours per FTE:** 101 student credit hours: 1 Faculty
b. **Direct instructional expenditures:**
    i. **Per student credit hour: $ 643.72** per student credit hour
    (In 2015-16, 101 credit hours were generated. Salary/credit hours)
    ii. **Per total degrees awarded: $21,672** per degree
    (In 2015-16, three degrees were awarded. Salary/degrees)
    iii. **Non-personnel expenditures per total academic FTE: UW, Laramie= $2500** annually to support program development and faculty professional travel.
c. **Course enrollment**
    i. Number of classes falling under University minimums
    Since Dr. Haynes has been at UW (2010) 23 out of 32 courses in Dr. Haynes's teaching load fall below UW's 10 students per course minimum. This ratio does include the EDCI 5250 course that is offered each fall semester for Agricultural Education post bac students, which is not expected to reach minimum enrollment numbers as it is cross listed with EDSE 3278 – Subject Matter Specific Methods I: Secondary Agricultural Education.
    ii. Lower-division courses falling under University minimums: 0
    (There are no 1000 or 2000 lower division undergraduate courses in this program.)
d. **Other instructional cost drivers, such as:**
    i. Section fill rates
    Only one section of Agricultural Education Courses is offered each semester.
    ii. Course completion rates
    Since Dr. Haynes's tenure at UW, the Agricultural Education program has had a 100% completion rate.
    iii. Curricular complexity
    The courses in the Agricultural Education program are classroom and laboratory based. The courses incorporate knowledge and skills to prepare future Agricultural Education teachers in pedagogy as well as content specific to incorporating the three-circle model used in Agricultural Education nationally. The three-circle model includes:

    1. Classroom and laboratory instruction
    2. Experiential learning through supervised agricultural experience (SAE)
    3. Leadership (FFA)



iv. Faculty course load

There is only one faculty member in the Agricultural Education program. Dr. J. Chris Haynes teaches on average, 15 credit hours per year.

e. **Research expenditures per tenured/tenure-track FTE (and other academic personnel, where appropriate)**

Research expenditures provided by the department of Secondary Education amount to $2500.00 per academic year. This money contributes to faculty travel, participation, and presentations at National and International Research Conferences.

f. **Compare your data to national benchmarks (Delaware data): N/A**

g. **Other: Currently enrolled numbers in the Ag. Ed. Major**

3 FRESHMEN
2 JUNIORS
14 SENIORS

Part II - Recommendations

Instructions: *After the review is completed, the Dean in consultation with the Department Head will select one of the following recommendations. In the justification, address each of the items associated with the recommendation.*

1) **Retain Due to Critical Need**
   a) A college may recommend that a degree program be retained due to its ability to fulfill a critical workforce need or shortage area for the state.
   b) Justification for retaining due to critical need must include:
      i) Explanation of why the program is important to the University/State/region
      The Ag Ed program is instrumental to UW's land grant mission. As one of a few programs in the region, UW provides many of the agriculture education teachers in the state of Wyoming and in surrounding states. Currently over 65% of the agriculture educators in the state are UW graduates and other states nearby look to UW to provide a portion of their Ag Ed program graduates as well.
      ii) Description of specific steps (already taken and/or planned) to increase enrollment and graduate production;
         (a) The College of Education will work with the College of Agriculture and Natural Resources to reinstate a concurrent major in an Agriculture field for our Agriculture Education majors. With the option of a concurrent major, more students may enroll.
         (b) We will design a recruitment plan to increase enrollment.
         (c) Dr. Haynes will investigate working with the UW Agriculture Extension offices.
         (d) Secondary Education will develop 2+2 articulation agreements with Wyoming's Community Colleges for the Agriculture Education Major.
         (e) Consider employing a cohort model of program delivery with an every other year admissions approach that could decrease the numbers of courses in the program that fail to meet minimum student enrollment thresholds.
      iii) Preliminary outcomes of steps taken.
      None to report at this time.

APPENDIX A

"Low Productivity" Programs Excluded from Review Process

1) **Major Program Modifications**
   a) Degree programs that have undergone recent program modifications that adversely impact graduate production for a college.
   b) Modifications traditionally include programs that have undergone recent name changes during the reporting window that result in two equivalent degree programs.

2) **Program/Major Specializations**
   a) Degree programs that have one or more specializations which reduce the total number of graduates.
   b) The exclusion may apply only for those specializations where the combination results in graduate production that meets the establish threshold for the degree.

3) **Terminated Programs**
   a) Degree programs that have been inactivated during the reporting period, but still depict graduates that fall below the established thresholds.
   b) Terminated programs will remain on the Program Productivity Report until inactive programs have completely cycled through the established reporting period.

4) **New Programs**
   a) Degree programs that have been activated within the past 7 years resulting in limited graduate production due to program implementation.
   b) Institutional review may be requested prior to the 7^{th} year if graduate production is not scaling to the required thresholds for the degree level.