

Wyoming Community College Commission
Request for
New, Pilot or Revised Degree or Certificate

A. College: Laramie County Community College

B. Date submitted to WCCC: _____

C. Program

1. Request for:

New Program Pilot Program Revised Program

2. Program Title: Technical Agriculture Operations

3. Degree or Certificate to be awarded:

Degree: AA AS AAS Other
 Certificate

4. Educational Pathway:

Energy Construction Hospitality Technology
 Health Care Other

5. Total number of credit hours: 62

6. Suggested CIP (Classification of Instructional Program) code (6-digit):

01.301, Agriculture Production Operations, General

7. Planned semester/year new program will begin: Fall 2017

8. Will any part of this program be provided by non-accredited vendor(s)?

YES (Provide details) NO

9. Will all or part of this program be available to students via online or other distance education technologies?

At the start of the program? Within three years of the start of the program? No

D. Program description as it will be included in college catalog:

The Technical Agriculture Operations program will help a student develop management and mechanical technical skills found in the production of raw agriculture products such as cattle and crops. Skills students will gain include animal and crop production, welding, diesel,

electricity and hydraulics. Students who complete this degree will be employable as a farm or ranch manager, farm or ranch hand, herdsman, feedlot manager, equipment management or those who want to return to the family farm or ranch.

1. Expected Student learning outcomes from completion of the program:

Upon completion of the program, students will be able to:

- Evaluate the sustainability of agricultural systems based on production methods, economics, management, and organizations variables.
- Demonstrated safety awareness when working with mechanical and electrical systems commonly found in a farm or ranch setting.
- Complete viable welds in an agriculture setting.
- Solve and repair diesel engine problems as they arise.
- Evaluate records and record keeping in the successful management of the farm or ranch.
- Recognize causes of the variability of prices in the agriculture industry.

2. Program Layout by Semester:

Course	Title	Credits
COLS 1000	Introduction to College Success: First-Year Seminar	3
ANSC 1010	Livestock Production	4
WELD 1555	Welding Technology Safety	2
WELD 1755	Shielded Metal Arc Welding I	4
WELD 1771	Gas Metal Arc Welding/Flux Core Arc Welding	4
Semester Credits		17
AECL 1000	Agroecology	4
ENGL 1010	English I: Composition	3
IST 1710	DC Electricity	2
IST 1711	DC Electrical Circuits	1
MATH 1510 OR MATH 1010 OR Higher	Technical Mathematics I Problem Solving	3 3
Semester Credits		13
AGEC 1010	Agriculture Economics I	3
AGEC 2010	Farm-Ranch Business Records	3

IST 1610	Fluid Power	2
IST 1611	Fluid Power Circuits	1
IST 1712	AC Electricity	2
IST 1713	AC Electrical Circuits	1
	Choose from approved U.S./Wyoming Constitution courses.	3
Semester Credits		15
AGEC 2395	Capstone Course for Agriculture Majors	3
DESL 1501	Automotive and Diesel Industrial Safety	1
DESL 1540	Diesel Electrical	5
DESL 1700	Diesel Drivetrain	5
CO/M 2010 OR CO/M 1015	Public Speaking Foundations of Communication	3
Semester Credits		17
Total Credits		62

E. New course prefixes, course credit hours and/or course numbers:

1. Recommended level of instruction (LOI) code if the community college is using a course prefix which is new to Wyoming public higher education institutions:

No new prefixes ___ Suggested level of instruction

2. New Course prefixes, numbers and/or credit hours have been coordinated:

with UW (transfer) ___ Yes ___ No Not Applicable
or WCCC (career technical) ___ Yes ___ No Not Applicable

F. New course descriptions:

1. The following are course descriptions for each new course in the program (include prefix, course number, title, credit hours and description):

All courses within the program are currently offered on campus.

G.* Can this program be delivered by current faculty? If not, what are the plans, budget and timeline for bringing on needed instructors?

Yes.

H. Summary of input from and coordination with citizens, business and industry or k-12 education:

A focus group consisted of K-12 educators, K-12 administration, industry professionals and current LCCC faculty have met to discuss this new program; it was well received. Through the focus group it has become evident that there are students in high school who would be very interested in a program that combines agriculture classes with Career and Technical Education (CTE) classes such as welding, diesel, electricity and hydraulics. There is a demand from students to pursue this type of degree. Also, this degree would create skilled workers for jobs in the agriculture industry.

I.* Resources required to start and sustain the program and the current plan to meet those resource needs through college or other external funds:

There is no need for new or additional funding or resources for this program.

J.* Projected demand in Wyoming and Nation for five years from the proposed implementation date (career technical programs):

1. State and National Trends

United States	Employment		Percent Change	Job Openings
	2014	2024		
Farmers, Ranchers and Other Agriculture Managers	929,800	911,700	-2%	15,840
Wyoming	Employment		Percent Change	Job Openings
	2014	2024		
Crop and Animal Production	2,301	2,616	13%	N/A

Source:

- National Data Source: Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, on the Internet at <http://www.onetonline.org/link/summary/11-9013.02>
- State Data Source: Wyoming Long-Term Industry Projects, http://doe.state.wy.us/lmi/projections/2016/long_term_industry_projections_2014-24.pdf

2. State and National Wages

Location	Pay Period	2015				
		10%	25%	Median	75%	90%
United States	Hourly	\$15.92	\$22.08	\$30.85	\$40.08	\$54.39
	Yearly	\$33,110.00	\$45,930.00	\$64,170.00	\$83,360.00	\$113,140.00
Wyoming	Hourly	Not Available				
	Yearly	Not Available				

Source:

- National Data Source: Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, on the Internet at <http://www.onetonline.org/link/summary/11-9013.02>

3. Primary student audience identified for this program:

The primary student audience are those who want to expand their agriculture and technical skill set. Students who enroll in the Technical Agriculture Operations degree program will primarily want to work in the production agriculture industry. Students also can take the skill learned in this program and apply them to other industries where there is a need to understand mechanical systems.

Through our focus group many students were identified who would want this type of degree which is unique to Wyoming. Wyoming has 51 agriculture programs in high schools. Many of those students want to gain skills with mechanical systems tend to go to school out of state or to private schools offering specialized mechanical training and subsequently return to the farm or ranch. Our focus group identified that a majority of these students would stay in state and go to a community college if provided the curriculum outlined in our proposed Technical Agriculture Operations degree.

4. Anticipated enrollment in the three academic years after WCCC approval (unduplicated headcount) with the basis for the estimate:

10 Year One 15 Year Two 20 Year Three

K.* Student recruitment and program marketing strategies to attract the broadest range of individuals for this particular program:

We will utilize the same recruitment strategies currently used in the agriculture department. We utilize a robust relationship with the Admissions Office to gather names of students interested in agriculture programs. Once prospective students have been identified, faculty in the department make at least three contacts with those students through both written and spoken communication. This has served to be beneficial over the past two years where we have grown 200 percent in students declaring agriculture majors. What we have experienced during our communication with students however, is we were lacking a degree program specifically containing CTE courses.

L.* Identification of similar programs at Wyoming Community Colleges and an overview of results of discussions with faculty and administrators at the relevant colleges regarding curriculum and possible joint projects:

Wyoming Community College Programs (Identify title, degree/certificate and number of credit hours)						
Casper College	Central Wyoming College	Eastern Wyoming College	Laramie County Community College	North-west College	Northern Wyoming Community College District	Western Wyoming Community College
N/A	N/A	N/A	In Process (62 credits)	N/A	N/A	N/A

M. Note available program and course articulations with other likely transfer institutions in the region, particularly for transfer AA and AS programs. (Note regional Bachelor of Applied Science transfer options in addition to UW.)

This program may transfer to the University of Wyoming for the completion of a Bachelor’s of Applied Science degree.

N. When appropriate, note partnerships with business, industry, associations or agencies that have contributed to the design of the proposed program and/or who will contribute to the delivery of the program.

Partnerships include:

- High School Agriculture Teachers
- High School Principal
- Retired Agriculture faculty
- Production Agriculturist
- Diesel faculty
- Agriculture faculty
- Welding faculty
- Program Director for Career and Technical Education (CTE)

O. Assessment of student learning and complete follow-up per performance indicators. How will the assessment outcomes be used to assure student learning and improve the program?

The following measures will be used to assess student learning and program outcomes:

1. Student learning outcomes achieved in the capstone course
2. Program course success rates will be evaluated each semester.
3. Number of students completing the degree
4. Number of students employed following the degree
5. Evaluations of program surveys by students.
6. Feedback from employers and graduates
7. Annual meetings with the advisory committee to review curriculum, student and program outcomes.

P.* Other program information or comments that would assist the commission in making a decision using the Guidelines for Use of this Evaluation Tool found in Appendix A of the 2010 WCCC Statewide Strategic Plan.

This program addresses Wyoming and regional interests in the following ways not addressed earlier in this request:

EDUCATED CITIZENTRY – This program is unique to Wyoming and will lessen the educational gap found on farms and ranches regarding management strategies and the ability to problem solve equipment operations and malfunctions.

DIVERSIFIED ECONOMY - The education and training gained by students in the Technical Agriculture Operations program will directly support the local Agriculture industry which is the third largest industry in Wyoming.

WORKFORCE DEVELOPMENT – Students who complete the Technical Agriculture Operations program will have the ability to move directly into the workforce with a basic understanding of diverse management needs and equipment found commonly in the production agriculture industry.

EFFICIENT SYSTEMS – This program combines current technical courses from several degree pathways to provide a wide range of skills necessary for competence as an Agriculture generalist on the ranch or farm.

ACCOUNTABILITY and IMPROVEMENT – Input from the LCCC Agriculture Advisory Committee, along with lab and classroom assessments, and annual internal reviews from students, instructors, and administrators will provide data to improve curriculum and lab delivery. LCCC anticipates industry input to review the Technical Agriculture Operations program of study for continuous quality program improvement much like it does with other technical programs offered at the college.

OTHER CRITERIA-

- **Labor Needs** – According to O-NET, it is estimated that a 13 percent increase in Wyoming’s workforce will be needed to meet agriculture industries needs for qualified workers in crop and livestock production from 2014 to 2024.
- **Curriculum Development** –We have reviewed degree programs in schools in the Midwest to ensure compatibility to student needs.
- **Pathways** – This pathway is unique in its career and technical orientation.
- **Recruitment Strategies** – Through or recruitment conversations, we realized that students are lacking a degree program specifically containing CTE courses needed for day to day operations.
- **Resource Needs** – With the construction of the Flexible Technology building and a new instructor in the agriculture department we can absorb an increased enrollment with the Technical Agriculture Operations degree program.

*Community colleges are not required to complete sections G, I, J, K, L, and P for **pilot** program requests.

SIGNATURE PAGE

Submitted by V. P. for
Academic Affairs**

Signature Date

Printed Name Title

Approved by the WCC Academic
Affairs Council

Signature Date

Printed Name Title

Approved by Program
Review Committee

Signature Date

Printed Name Title

**Signature by the Community College Vice President for Academic Affairs verifies that institutional curriculum approval processes have been completed and that the Community College Board of Trustees has approved this program request as per institutional policy.