

## LCCC New Program of Study/Concentration Form

In accordance with Program Development and Approval Procedure, 2.3.1P, this form must be completed to establish the submission of a new credit-bearing program of study or concentration.

<b>Dean's Signature:</b> <a href="#">Please click here to add signature.</a>		<b>Date:</b> <a href="#">Click here to select today's date.</a>
1.	<b>Program Contact:</b>	Rosemary McBride
2.	<b>Effective Catalog Year:</b>	2017-2018
<b>Stage One: Identification of Program, Need, Goals and Competencies</b>		
3.	<b>Program Title:</b>	Agriculture – Rangeland Ecology and Management Concentration
4.	<b>O*NET-SOC Code:</b>	Locate the code at: <a href="http://www.onetonline.org/help/online/search">http://www.onetonline.org/help/online/search</a> Range Managers 19-1031.02, Conservation Scientists 19-1031.00, Forest and Conservation Workers 45-1011.00
5.	<b>CIP Code:</b>	Locate the code at: <a href="http://nces.ed.gov/ipeds/cipcode/default.aspx?y=55">http://nces.ed.gov/ipeds/cipcode/default.aspx?y=55</a> Range Science and Management 01.1106
6.	<b>Request for:</b>	<input type="checkbox"/> New Program <input checked="" type="checkbox"/> New Program Concentration
7.	<b>Type of Program: (choose one)</b>	<input type="checkbox"/> Associate of Arts degree (60-64 credits in length) <input checked="" type="checkbox"/> Associate of Science degree (60-64 credits in length) <input type="checkbox"/> Associate of Applied Science degree (60-72 credits in length)
		<input type="checkbox"/> Credit Certificate (30-45 credits) <i>For financial aid eligibility Credit Certificates and Credit Diplomas must be a minimum of 15 weeks and 16 credits and all credits in the program must be accepted toward an AA, AS or AAS degree at LCCC.</i> <input type="checkbox"/> Credit Diploma (12-29 credits)
8.	<b>Rationale for New Program:</b>	<p>Explain the goals of the new program and how this new program will include robust curriculum leading to a degree or certificate.</p> <p>The Rangeland Ecology and Management concentration couples the core agriculture program with an in depth study into rangelands and grasslands of arid regions and ecological science investigations. A Rangeland Ecology and Management degree allows students to pursue a career in both the public and private sectors. The core agriculture program and resources upon which this program is founded has a long-standing track record of success of integrating incoming students, citizens, and the agriculture industry in the core mission of Laramie County Community College and the Agriculture Program. Laramie County Conservation District USDA/NRCS has become increasingly supportive of rangeland and agroecology education programs at the College and advocated for the development of this program to provide students and research to support their mission in the region. The U.S. Bureau of Labor Statistics predicts steady job growth for agriculture-related fields, including rangeland conservationists, environmental consultants, restoration ecologists, and ranch managers.</p>
9.	<b>Program Description (as it will appear in the catalog)</b>	The Associate of Science Agriculture -- Rangeland Ecology and Management concentration equips students with skills in applied management and ecological fundamentals and features a hands-on, outdoor-focused, research-based curriculum. This concentration is designed to allow students the option to pursue a bachelor's degree in Rangeland Science at a University. A Rangeland Ecology and Management degree allows students to pursue a career in both the public and private sectors.
10.	<b>Program Competencies:</b>	<p>Upon completion of the Agriculture – Rangeland Ecology and Management Concentration students will be able to:</p> <ol style="list-style-type: none"> <li>Analyze management problems in rangeland ecosystems; then evaluate and apply various tools to problem solve solutions and reflect on outcomes and effectiveness. (Problem Solving)</li> <li>Practice accessing, evaluating, and combining appropriate resources to foster decision making in an agriculture setting. (Information Literacy)</li> <li>Apply scientific and quantitative reasoning to concrete scenarios in all disciplines to create meaning and understanding and to communicate solutions to their audience. (Quantitative and Scientific Reasoning)</li> </ol>

		4. Collaborate on an interdisciplinary level, foster teamwork, and work toward solutions in Rangeland Ecology and Management on an interpersonal, local, and global scale. (Collaboration)																																																																																										
11.	<b>Program Advisory Committee Summary Report:</b>	The Advisory Committee discussed this proposal at its meeting. Full meeting minutes have been uploaded in CurricUNET.																																																																																										
<b>Stage Two: Program Research and Curriculum Development</b>																																																																																												
12.	<b>Articulation:</b>	Conversations with program faculty at University of Wyoming have been instrumental in developing the course sequence. We will pursue 2+2 articulation with the University of Wyoming upon approval.																																																																																										
13.	<b>Identification of similar Programs in WY and Region:</b>	A.S. Northwest, Eastern, Central, and Casper Community College, B.S. University of Wyoming																																																																																										
14.	<b>Implementation Plan/Timeline:</b>	Program Concentration Proposal Deadline: November 11th, 2016, Approval by ASC Committee, Marketed for Optional Concentration for 2017-2018, Recruitment in area and regional schools for new student enrollment.																																																																																										
15.	<b>Program Sequence:</b>	<table border="1"> <thead> <tr> <th>Course</th> <th>Title</th> <th>Credits</th> </tr> </thead> <tbody> <tr> <td>COLS 1000</td> <td>Introduction to College Success: First-Year Seminar</td> <td>3</td> </tr> <tr> <td>AGEC 1010*</td> <td>Agricultural Economics I</td> <td>3</td> </tr> <tr> <td>ANSC 1010</td> <td>Livestock Production</td> <td>4</td> </tr> <tr> <td>ENGL 1010*+</td> <td>English I: Composition</td> <td>3</td> </tr> <tr> <td>MATH 1400*+</td> <td>College Algebra</td> <td>3</td> </tr> <tr> <td>Course Number</td> <td>Course Title</td> <td>Credits</td> </tr> <tr> <td colspan="2" style="text-align: right;"><b>Total Credits</b></td> <td><b>16</b></td> </tr> <tr> <td>AGEC 1020*</td> <td>Agricultural Economics II</td> <td>3</td> </tr> <tr> <td>AECL 1000</td> <td>Agroecology</td> <td>4</td> </tr> <tr> <td>BIOL 1010</td> <td>General Biology</td> <td>4</td> </tr> <tr> <td>CO/M 2010*</td> <td>Public Speaking</td> <td>3</td> </tr> <tr> <td>Course Number</td> <td>Course Title</td> <td>Credits</td> </tr> <tr> <td>Course Number</td> <td>Course Title</td> <td>Credits</td> </tr> <tr> <td colspan="2" style="text-align: right;"><b>Total Credits</b></td> <td><b>14</b></td> </tr> <tr> <td>AECL 2010*</td> <td>The Ecological Web: Soils</td> <td>4</td> </tr> <tr> <td>RGMG 2000*</td> <td>Principles of Range Management</td> <td>3</td> </tr> <tr> <td>BIOL 2023*</td> <td>Biology of Plants and Fungi</td> <td>4</td> </tr> <tr> <td>CHEM 1000*</td> <td>Introductory Chemistry</td> <td>4</td> </tr> <tr> <td>GenEd: WY</td> <td>Choose from approved US/WY Constitutional courses</td> <td>3</td> </tr> <tr> <td>Course Number</td> <td>Course Title</td> <td>Credits</td> </tr> <tr> <td colspan="2" style="text-align: right;"><b>Total Credits</b></td> <td><b>18</b></td> </tr> <tr> <td>AECL 2395</td> <td>Agricultural Science Research Methods Capstone</td> <td>3</td> </tr> <tr> <td>STAT 2050*</td> <td>Fundamentals of Statistics</td> <td>4</td> </tr> <tr> <td>GEOG 1100*</td> <td>Introduction to Geographic Information Systems</td> <td>4</td> </tr> <tr> <td>RGMG 2500*</td> <td>Rangeland Plant Identification</td> <td>2</td> </tr> <tr> <td>GenEd: AA</td> <td>Choose from approved Aesthetic Analysis courses</td> <td>3</td> </tr> <tr> <td>Course Number</td> <td>Course Title</td> <td>Credits</td> </tr> <tr> <td colspan="2" style="text-align: right;"><b>Total Credits</b></td> <td><b>16</b></td> </tr> <tr> <td colspan="2" style="text-align: right;"><b>Total Program Credits</b></td> <td><b>64</b></td> </tr> </tbody> </table>	Course	Title	Credits	COLS 1000	Introduction to College Success: First-Year Seminar	3	AGEC 1010*	Agricultural Economics I	3	ANSC 1010	Livestock Production	4	ENGL 1010*+	English I: Composition	3	MATH 1400*+	College Algebra	3	Course Number	Course Title	Credits	<b>Total Credits</b>		<b>16</b>	AGEC 1020*	Agricultural Economics II	3	AECL 1000	Agroecology	4	BIOL 1010	General Biology	4	CO/M 2010*	Public Speaking	3	Course Number	Course Title	Credits	Course Number	Course Title	Credits	<b>Total Credits</b>		<b>14</b>	AECL 2010*	The Ecological Web: Soils	4	RGMG 2000*	Principles of Range Management	3	BIOL 2023*	Biology of Plants and Fungi	4	CHEM 1000*	Introductory Chemistry	4	GenEd: WY	Choose from approved US/WY Constitutional courses	3	Course Number	Course Title	Credits	<b>Total Credits</b>		<b>18</b>	AECL 2395	Agricultural Science Research Methods Capstone	3	STAT 2050*	Fundamentals of Statistics	4	GEOG 1100*	Introduction to Geographic Information Systems	4	RGMG 2500*	Rangeland Plant Identification	2	GenEd: AA	Choose from approved Aesthetic Analysis courses	3	Course Number	Course Title	Credits	<b>Total Credits</b>		<b>16</b>	<b>Total Program Credits</b>		<b>64</b>
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16.	<b>Program Duration:</b>	<p><i>Credit Certificate and Credit Diploma programs must be a minimum of 15 weeks and 16 credits. Other program types do not need to provide this information.</i></p> <p>Number of weeks to complete this program: 4 semesters</p>																																																																																										
17.	<b>New Courses:</b>	<p>AECL 2395 Agricultural Research Methods Capstone and RGMG 2500 Rangeland Plant Identification. As of 11.18.2016 AECL 2395 and RGMG 2500 has both been reviewed and had been recommended for ASC approval.</p> <p>Have all new courses been confirmed by the Course Coordinator? X YES <input type="checkbox"/> NO</p> <p>Is an MCOR attached for each new course? X YES <input type="checkbox"/> NO</p>																																																																																										

**Stage Three: Identification of Needed Resources**

**18. Faculty/Staff:** Can this program be delivered by current faculty? If not, what are the plans, budget and timeline for bringing on needed instructors?  
 Yes, the course sequence utilizes current courses taught in the Agriculture Science program and in other departments on campus. The proposed concentration is an effort to expand current enrollment by offering concentrations in other markets. If projected student recruitment is reached in the first 3 years, additional adjunct instructors may be needed to teach additional sections of core agriculture courses that serve all concentrations. The new courses in the program sequence will first be needed in the Spring 2019 semester, providing sufficient opportunity for resource identification and allocation within the school of BATS to meet identified need.

**19. Equipment:** What resources are required to start and sustain the program? What is the current plan to meet those resource needs through the college or other external funds?  
 No additional resources are needed to start the concentration.

**20. Cost of Program:** Total cost of program to a student: Enter overall cost here. Consider additional course and materials fees, if any, above the usual tuition, course fees and book costs.  
 X Not applicable

Identify costs associated with the establishment of this program in the table below:

Budget Summary	Account Number	Budget Amount
Adjunct Instructor/ Overload 3 credits	10-410-120575-8120	\$2,100
Adjunct Instructor/ Overload 2 credits	10-410-120575-8120	\$1,400
Budget item	Account number	Amount
Budget item	Account number	Amount
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<b>TOTAL:</b>		\$3,500

Additional comments regarding the cost of program implementation:  
 We are proposing the course with no additional costs, if enrollment targets are met, the costs identified above are a possibility but unforeseen at this time. The target recruitment goals are 8 students between Rangeland Ecology and Management and Agroecology for year 1 with a 15% growth in enrollment in first 3 years.

**21. Program/Course Fees (refer to LCCC 4.10.1P):** Are fees being requested for this program?  YES  NO  
 If yes click here to provide details and rationale.

Are new or revised fees being requested for courses with this program?  YES  NO  
 If yes click here to provide details and rationale.

**Stage Four: Process Checklist**

**22. Submit for Financial Aid Review:** Financial Aid has reviewed the new program submission to ensure it includes appropriate information for seeking U.S. Department of Education approval for Title IV eligibility.  
**Financial Aid confirmation:** Please click here to add signature.

23.	<b>Submit for Registrar Review:</b>	Registrar has reviewed the new program submission to confirm accuracy and feasibility. <b>Registrar confirmation:</b> Approval has been indicated in CurricUNET.
24.	<b>Submit for Institutional Effectiveness Review:</b>	Program has been reviewed by the office of Institutional Effectiveness for HLC and Institutional Research reporting. <b>Institutional Effectiveness confirmation:</b> <a href="#">Please click here to add signature.</a>
25.	<b>Documentation Checklist:</b>	In addition to this completed form, the following documentation must be included (as applicable): X Wyoming Community College Commission form X MCOR for each new course N/A Student Fee Request form
<b>Stage Five: Administrative Review</b>		
26.	<b>Administrative Procedure 2.1P:</b>	<input type="checkbox"/> Program meets credits required under Administrative Procedure 2.1P Degrees and Certificates <input type="checkbox"/> Program does NOT meet credits required under 2.1P Degrees and Certificates/Exception Requested A compelling case for the variation must be made. Supporting documentation for the request citing accreditation or other professional certifying agents needs to be attached if applicable. <a href="#">Please click here to provide explanation for variance request. Attach supporting documentation as requested above.</a>
27.	<b>VPAA Signed Approval for Exception to Administrative Procedure 2.1P:</b>	<b>SIGNED:</b> <a href="#">Please click here to add signature.</a> <b>DATE:</b> _____

Other relevant information from the program contact:

The Rangeland Ecology and Management concentration is aimed at the student seeking a degree that will be versatile and rigorous enough to prepare him or her for completion of a Bachelor's degree and seek gainful employment in an occupation in the private or public sector that will allow them to work in the outdoors with land, plants, livestock, wildlife, and the public. Per the Wyoming Department of Employment Research & Planning the state and national employment forecast in areas served by this degree include the following:

United States	Employment		Percent Change	Job Openings
	2010	2020		
54162 Environmental Consulting Services	BLS reports that 89,400 environmental specialists were employed in 2010 with a growth projection of 19% expected between 2010 and 2020	Projected number of jobs at 19% growth 106,386	19%	On indeed.com
Wyoming	Employment		Percent Change	Job Openings
	2004	2014		
19-1031 Conservation Scientists	102	103	1%	
45-4011 Forest and Conservation Workers	77	99	16.9%	