Walla Walla Community College
Applied Baccalaureate Degree Program

Bachelor of Applied Science in
Sustainable Agriculture Systems

Program Proposal
August 16, 2017
Revised September 25, 2017

COVER SHEET
NEW DEGREE PROGRAM PROPOSAL

Program Information

Institution Name: **Walla Walla Community College**

Degree Name: **BAS Sustainable Agriculture Systems** CIP Code: 01.0308

Name(s) of existing technical associate degree(s) that will serve as the foundation for this program:

Degree:	AAAS Plant & Soil Science	CIP Code:	01.0304	Year Began:	**1974**
Degree:	AAAS Animal Science	CIP Code:	01.0302	Year Began:	**1977**
Degree:	AAAS Agri-Business	CIP Code:	01.0101	Year Began:	**1974**
Degree:	AAAS Precision Agriculture	CIP Code:	01.0201	Year Began:	**2014**
Degree:	AAAS Natural Resources Technology & Management	CIP Code:	03.0101	Year Began:	**2007**
Degree:	AAAS Watershed Ecology	CIP Code:	03.0101	Year Began:	**2010**
Degree:	AAAS Irrigation Technology	CIP Code:	01.0201	Year Began:	**1977**

Proposed Start Implementation Date (i.e. Fall 2014): **Fall 2018**

Proposal Criteria: *Please respond to all eight (8) areas listed in proposal criteria.*
Page Limit: 30 pages

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Contents

Introduction:

Walla Walla Community College (WWCC) has steadily grown from 850 students in 1967 to a present annual enrollment of over 10,000. Located on approximately 130 acres, the Walla Walla campus has become a center for innovation, education, training, and learning opportunities in the region (Walla Walla, Columbia, Asotin, Garfield counties, and bordering counties in Idaho and Oregon). Walla Walla Community College is a comprehensive institution offering curriculum in multiple areas of study including Arts and Sciences/Transfer, Workforce Education, Pre-College, and Basic Skills.

Walla Walla Community College is well prepared to serve the needs of our local economy and employer demand through a wide range of workforce programs designed to prepare students to enter the workforce after completion. There has been increasing demand for employees to have advancement opportunities or training for higher paying jobs without having to leave the valley. Walla Walla Community College is seeking to strengthen our professional technical programs through the addition of an applied baccalaureate degree in Sustainable Agriculture Systems.

Walla Walla County, the most populated county in the WWCC service region, includes the following career sectors which will be served by the proposed BAS Sustainable Agriculture Systems program:

- Farm and Ranch Manager
- Farm Service Technician
- Environmental Science Technician
- Precision Agriculture Specialist
- Sales Representative
- Agricultural Inspector
- Conservation Specialist
- Agricultural & Food Science Technicians

Fourteen other sustainable agriculture degree programs/majors throughout the U.S. were reviewed and assessed to provide a point of reference during the development of the program. The majority of similar programs focus primarily on crop production practices, while some focus more on developing small scale urban fringe systems emphasizing direct marketing opportunities. Based on the research, the program includes a mix of sustainable production and marketing/business skills that better meet the needs of our region.

The proposed BAS in Sustainable Agriculture Systems:

1. Aligns with the core themes, mission and vision of Walla Walla Community College.
2. Provides access to face-to-face baccalaureate education not available to place-bound students in rural eastern Washington at an affordable rate.

3. Supports SBCTC goals of providing an educated workforce to meet the demands of local employers.
4. Builds on existing successful workforce programs in Agri-Business, Animal Science, Plant & Soil Science, Irrigation Technology, Natural Resources Technology & Management, and Watershed Ecology.
5. Provides a baccalaureate pathway for other workforce programs.
6. Supports wage progression through educational attainment for working adults.

Criteria 1: Curriculum Demonstrates Baccalaureate Level Rigor

WWCC Learning Outcomes

Walla Walla Community College is committed to preparing its students for success. Toward that end, WWCC strives to ensure that every student who earns a degree or certificate, whether through academic transfer or workforce programs, achieves college-level knowledge, skills, and abilities in these four areas:

Communication
Community Engagement
Critical Thinking
Information and Technology Literacy

These areas constitute WWCC's College-wide Learning Assessment Outcomes (CwLAs), which demonstrate our commitment to all students across all college programs. These outcomes were selected based on research into Washington State community colleges, transfer institutions, and national organizations such as the American Association of Colleges and Universities.

For more than fifteen years, WWCC has done significant work in outcomes and assessment in academic transfer and in Professional Technical, Nursing and Allied Health, and Corrections education. The establishment of CwLAs represents a convergence of these areas by building on the established culture of continuous assessment and improvement to bring together all areas of the college with a focus on common learning goals. This ongoing work dovetails with Northwest Commissions on Colleges Universities (NWCCU) accreditation standards and recommendations for accreditation from the 2015 accreditation visit.

WWCC has invested significant time and effort in identifying learning outcomes as well as developing a systematic and sustainable assessment process. Up to this point, academic transfer and professional technical programs had each developed outcomes assessment practices. The NWCCU's 2015 year seven accreditation visit contained recommendations to combine all programs and campuses under a single college-wide general education outcomes assessment program, to ensure that the assessment system documents that students achieve identified learning outcomes at the course and transfer degree level, and to use the results of assessments in improving our practices to enhance student learning achievements .

Since receiving this recommendation in October 2015, the AA/AS Degree Outcomes and Assessment Committee has expanded to include representatives from across all divisions, programs, and campuses. The AA/AS Degree Outcomes and Assessment Committee transformed into the College-wide Outcomes and Learning Assessment Committee (CwOLA) and drafted a charter that reflects its expanded mission. The CwOLA cycle brings together all aspects of assessing and documenting student achievement of learning objectives and creates a mechanism for continuous improvement through the feedback loop.

All BAS courses will be assessed based on WWCC's college-wide learning assessment outcomes for applied science degrees. The following list describes these outcomes in detail.

Standard (1): Program learning outcomes

Upon completion of this program, successful students will be able to:

1. Apply key concepts in human ecology and natural resources management to sustainable agriculture systems regionally, nationally and globally, and communicate those concepts to a range of audiences in effective written and oral form.
2. Critically examine complex agricultural systems using a range of frameworks and tools.
3. Identify and frame constraints and opportunities for future sustainable agriculture systems.
4. Critique different problem-solving methods and approaches, recognize and display visionary leadership with moral and ethical integrity.
5. Analyze complex agricultural systems, integrating societal, environmental and economic perspectives.
6. Investigate and develop sound research design, apply current research methods and perspectives, and experiment with new approaches to scientific inquiry.
7. Work in collaborative teams, present information for varied contexts and audiences, negotiate approaches and viewpoints, and take leadership roles on important issues.
8. Reflect critically on their own values and examine different paradigms and perspectives to understand how values shape commerce, research, policy and action in sustainable agriculture.

Standard (2): Program evaluation criteria and process

Walla Walla Community College will conduct a formal program review to evaluate program viability, student outcomes, and employment rates of graduates. The Assistant Dean for BAS Programs, Business, and Computer Science will work with the Dean of Workforce Education and Applied Bachelor's Programs and the Vice President of Instruction to initiate the process of review by submission of a formal report on a bi-annual basis. This report will answer the guiding questions presented in the Program Viability Analysis as outlined by the SBCTC (https://www.sbctc.edu/resources/documents/colleges-staff/programs-services/professional-technical/viabilityanalysis.pdf):

Table 1: SAS Program Evaluation Criteria and Process	
Annual Student Evaluations	▪ Completion of computer based summative evaluations of individual courses each year ▪ Instructor evaluations using computer based template
Exit Surveys	▪ Student exit survey ▪ Effectiveness of skills and knowledge progression ▪ Effectiveness of program and institutional support and resources ▪ Preparedness to enter workforce
Graduate/Alumni Surveys	▪ Complete annually – seeking additional employment information, return to achieve additional schooling, career satisfaction
Employer Surveys	▪ Effectiveness and preparedness of graduates to achieve workplace goals ▪ Effectiveness and preparedness of graduates to interface with clients and co-workers effectively
Program Advisory Committee (two meetings/year)	▪ Surveyed annually ▪ Effectiveness of program in meeting community needs ▪ Participation of students/faculty in community service activities ▪ Consultation with members to evaluate emerging technology, relevant information in the development for community inter-professional relationships ▪ Evaluating relevance, rigor, cohesiveness of curriculum ▪ Guidance for changes needed after implementation of the BASSAS curriculum
Quarterly Review of Syllabi and Course Content	▪ Agriculture Department – update and format review/evaluation ▪ Evaluate alignment with current research or changes
Quarterly Course Evaluation – End of Course Report	▪ Monthly faculty meeting ▪ Topics and sequencing evaluated for greatest impact of foundational knowledge ▪ Reports submitted to evaluate course effectiveness/textbook/teaching methods ▪ Evaluation methods examined for thoroughness, accuracy and meeting program department goals ▪ Course comparison completed to evaluate layering of subject content ▪ Determine if changes will be made

Standard (3): Course preparation needed by students transferring with technical associate degree

All interested students meeting the minimum requirements for entrance into the BASSAS are encouraged to apply. Applicants must have completed the following prior to admission:

BAS applicants must complete one of the following AAAS Programs:

- Plant & Soil Science
- Animal Science
- Precision Agriculture
- Natural Resources Technology & Management
- Watershed Ecology
- Irrigation Technology

Student must complete the following general education courses prior to applying for the BASSAS:

Table 2: SAS Program Prerequisite Requirements General Education		
ENGL&101	English Composition I	5
CMST& 220	Public Speaking	5
MATH& 146 *OR* MATH& 141	Introduction to Statistics *OR* Pre-Calculus	5
PHIL 131	Introduction to Ethics	5
AGRI 201	Microeconomics in Agriculture	5
SOC 101	Introduction to Sociology	5
	Total	**30**

Table 3: SAS Program Prerequisite Courses Lower Division Major Courses		
AGPR 100	Introduction to Agriculture & Natural Resources Careers	5
AGPR 113	Cultivated Plants	5
AGPR 140	Agriculture Safety and Pesticides	5
ENT 150	Introduction to GIS	3
ENT 151	Intermediate GIS	3
WTM 112	Irrigation Principles	5
WTM 135	Issues in Agriculture and Natural Resources	5
AGPR 201	Basic Soil Science	5
	Program Approved Electives	20
	Total Lower Division Major Course	**56**

Standard (4): General education component

A total of 65 credits of general education coursework are required for graduation from the BASSAS. 30 of those credits will be completed within the AAAS degrees as outlined in Table 4. The additional 35 credits will include courses from communications, quantitative skills, natural sciences, social sciences, and humanities. A new upper division general education course, PHIL 331 Professional Ethics will be created for the BASSAS program.

Table 4: SAS General Education Requirements		
Communication		
ENGL& 101	English Composition I	5
CMST 220	Public Speaking	5
	Total Communications	**10**
Quantitative Skills		
MATH& 146 *OR* MATH& 141	Introduction to Statistics *OR* Pre-Calculus	5
	Total Quantitative Skills	**5**
Humanities		
PHIL 131	Introduction to Ethics	5
PHIL 330	Professional Ethics	5
	Total Humanities	**10**
Social Sciences		
SOC 101	Introduction to Sociology	5
AGRI 201	Microeconomics in Agriculture	5
	Total Social Science	**10**
Natural Sciences		
CHEM& 161/162/163 *OR* CHEM& 121/122/123	General Chemistry I, II, & III Introduction to Chemistry, Introduction to Organic Chemistry, Introduction to Biochemistry	15
BIO& 211/212/213	Cellular Biology, Animal Biology, Plant Biology	15
	Total Science	**30**
	Total General Education Credits	**65**

Standard (5): Course work needed at junior and senior levels in the BAS

Based on research in the field and advisory committee input, WWCC will create the following upper division business courses for the BASSAS. Full course descriptions and outcomes and student schedule can be found in Appendix A.

Table 5: SAS Upper Division Major Courses		
BUS 310	Foundations of Management	5
BUS 350	Entrepreneurial Finance	5
BUS 360	Project Management	5
BUS 480	Technical Writing	5
SAS 310	Principles of Sustainability	5
SAS 330	Water, Soil and Energy Conservation	5
SAS 340	Integrated Pest Management	5
SAS 350	Agricultural Applications of GIS	5
SAS 420	Advanced Water and Natural Resources Policy	5
SAS 440	Advanced Cropping Systems	5
SAS 470	Sustainable Agriculture Systems	5
SAS 495	Sustainable Agriculture Capstone	5
	Total Upper Division Major Courses	**60**

Table 6: BAS Sustainable Agriculture Systems Requirements	
	Credits
General Education Courses	65
Lower Division Major Courses	56
Upper Division Major Courses	60
Total Degree Credits	**181**

Criteria 2: Qualified Faculty

All full-time faculty teaching in the BASSAS program hold master's degrees (see Table 7). They are required to complete certification as Washington professional and technical college instructors. All part-time faculty hired to teach in the BASSAS program will be required to have a Master's degree in an appropriate field.

Table 7: Faculty Profiles

Faculty Name	Credentials	Courses Qualified to Teach
Debra Frazier	MS Ag Economics	SAS 420, Advanced Water and Natural Resources Policy
Gwen Stahnke	PhD Turf Sciences	SAS 340, Integrated Pest Management
Mathew Williams	MS Ag Science	SAS 440, Advanced Cropping systems SAS 470, Sustainable Agriculture Systems
Dave Stockdale	MS Plant Science	SAS 310, Principles of Sustainability
Jason Selwitz	PhD Engineering Science	SAS 495, Sustainable Agriculture Capstone
Joseph Cooke	MS Taxation JD Law	BUS 350, Entrepreneurial Finance BUS 480, Technical Writing
Tim Burgoyne	MBA PhD Public Policy & Social Justice (expected graduation 2017)	BUS 310, Foundations of Management BUS 360, Project Management
Need PHIL Instructor	PhD	PHIL 330, Professional Ethics

Additional faculty needed to teach:

SAS 330 – Water, Soil and Energy Conservation
SAS 350 – Agricultural Applications of GIS

Support Staff

Table 8: Support Staff for BASSAS Program		
Support Staff	**Role**	**Credentials**
Jerry Anhorn	Dean of Workforce Education and Applied Bachelor's Programs	MS Agriculture Science
Cindy Walker	Assistant Dean for BAS Programs, Business, and Computer Science	BA General Business Pursuing MA
0.5 Program Navigator To be hired	Outreach and Retention	
0.5 Secretary Lead On Staff	Program Support	

Criteria 3: Selective Admissions Process Consistent with an Open-door Institution

Open Access

Walla Walla Community College operates under an open door admission policy granting admission to all applicants who are 18 years of age or older and/or graduated from high schools accredited by a regional accrediting association (Administrative Policy 7-010). The College's values will apply to the Sustainable Agriculture Systems BAS program, and will guide the program's selection process. One of the goals of the selection process is that BASSAS participants will mirror or exceed the student diversity of WWCC. To help meet this goal, a set of admissions criteria, an applicant selection process, and participant monitoring will support the BASSAS admission process. In addition, the BASSAS Program Navigator will develop a recruiting and outreach plan designed to attract a diverse applicant pool.

Many other graduates from Agriculture AAS program in and outside of Washington will be eligible to apply for the BASSAS program. The students may need to complete some pre-requisite courses prior to applying. Some examples of Washington Agriculture programs are:

Big Bend Community College Agriculture Production AAS

Columbia Basin College	Agriculture Business and Management AAS Agriculture Production AAS
Skagit Valley College	Agroecology and Sustainable Agriculture AAS
Spokane Community College	Agriculture Business and Management AAS
Wenatchee Valley College	Agriculture Business and Management AAS Agriculture Production AAS
Yakima Valley Community College	Agriculture Business and Management AAS

The Assistant Dean for BAS Programs, Business and Computer Science has reached out to the colleges listed to begin discussion around articulation agreements for the BASSAS program.

Admissions Criteria

The following admissions criteria have been identified as creating opportunities for a broad spectrum of applicants as well as optimizing the likelihood of successful completion of the Sustainable Agriculture Systems BAS degree.

Admissions Criteria for the Sustainable Agriculture Systems BAS degree program:

- Completion of a WWCC Associate of Applied Arts & Sciences degree in Plant & Soil Science, Animal Science, Precision Agriculture, Natural Resources Technology & Management, Irrigation Technology or Watershed Ecology with a grade of 2.5 or higher in all degree program courses and a 2.0 or higher in all general education courses.
- Completion of all pre-requisite courses.

OR

- Completion of an equivalent degree from an accredited college with a grade of 2.5 or higher in all degree program courses and a 2.0 or higher in all general education courses.
- Completion of program pre-requisite courses.

- An application packet which includes:

  - Completed WWCC Admissions Form
  - Completed BAS Program Application
  - Resume
  - Official College Transcripts

Selection Process

If the number of qualified applicants exceeds space availability, the selection committee will proceed to evaluate the individual applicants on specific criteria and identify those to be invited to participate. The selection process for the Sustainable Agriculture Systems BAS program will be conducted by a committee that includes the BASSAS Program Navigator, a BASSAS faculty representative, and the dean or assistant dean. The selection committee will first review each application packet to identify those applicants who meet the admissions criteria.

This process includes the following steps:

1. Review each application packet and rate each applicant based on evaluation criteria.

Application Requirements	Maximum Points	Notes
Cumulative College Level Associate Degree GPA	30	Multiply cumulative GPA by 7.5 to determine total points
Average GPA for in the following core required courses: AGPR 100, AGPR 113, AGPR 140, ENT 150, ENT 151, WTM 112, WTM 135, AGPR 201	40	Multiply average GPA by 10 to determine total points
Resume Quality	10	Based on Evaluation Rubric*
Paid or Unpaid Experience	20	Based on Work Experience Rating Scale
Total	100	

*Evaluation Rubric can be found in Appendix B

Paid or Unpaid Experience Rating Scale	
Amount of Experience	Points Possible
No experience in agriculture or related Field	0
Less than one year of experience in agriculture or related field	5
One to three years of experience in agriculture or related field	10
Three to five years of experience in agriculture or related field	15
More than five years of experience in agriculture or related field	20

2. Review and discuss the ratings of each applicant by the committee. Where significant disagreement exists regarding ratings for an applicant, the committee will review the applicant's data and reach a consensus on the rating.
3. The cohort slots will be awarded based on applicant score from the selection committee.

Program Support for Diversity

Walla Walla County's population in 2015 was 21.6% Hispanic or Latino origin, while the State was only 12.4%. And while 88.6% of Walla Walla County's population 25 years and older during the years 2010-2014 were high school graduates, this graduation rate lags behind the 90.2% rate for the state. Over the same period, those holding a bachelor's degree or higher made up 26.5% of Walla Walla County residents age 25 and older compared to 32.3% of state residents.[1] As our community continues to diversify, the lag in educational attainment rates is projected to continue to decline. Part of WWCC's strategy to close this educational attainment gap is to add innovative and relevant educational pathways such as the BAS in Sustainable Agriculture Systems. Table 9 includes information for WWCC enrollment demographics. Enrollment of 22% Hispanic/Latino is very close to the county's percentage of Hispanic or Latino population.

Table 9: 2014-2015 Student Enrollment Demographics	
Race/Ethnicity	
Asian/Pacific Islander	1%
African American	1%
Hispanic/Latino	22%
Native American	1%
Other/Multiracial	3%
Unknown	15%
White/Non-Hispanic	56%
Gender	
Female	58%
Male	42%
Assistance	
Eligible students receiving need based financial aid	67%

The BAS Program Navigator will:

- Recruit people of color who are WWCC program graduates. All eligible program graduates will receive information about the new program via email and direct mail.

[1] Walla Walla County profile: *population and educational attainment*
https://esd.wa.gov/labormarketinfo/county-profiles/walla-walla

- Recruit students from local high school agriculture programs by presenting information during agriculture classes. Attend high school career fairs;
- Recruit professionals to serve as role models and as members of the program's advisory committee. Graduates and professionals will be asked to give presentations to currently enrolled associate degree students to encourage them to pursue the bachelor's degree;
- Engage in targeted marketing efforts to encourage persons of color or persons from under-served populations to apply to the program;
- Apply best practices for identifying potential program hires from under-represented groups;
- Present information to businesses and professional organizations to recruit their employees of color or their employees from under-served populations to enroll in the BASSAS program;
- Regularly assess recruitment/retention efforts from under-represented populations, and continually strive to improve the program's appreciation and respect for diversity.
- Hold extended orientations focused on diverse students which will include segments that address concerns such as academic preparation, finances, career exploration, and meaningful work experiences. Orientation for parents of diverse student populations will also be held.
- Implement faculty and staff development programs to help faculty and staff understand the needs of diverse populations.

Criteria 4: Appropriate Student Services Plan

In keeping with BAS best practices across the state, WWCC will embed student services within the BASSAS program. A BAS program navigator will be hired to provide a focused student support system. The program navigator will be the single point of contact for all students. The navigator will discuss career and educational goals with each student upon entry into the program and maintain student records. Navigator will meet quarterly with each student to discuss progress, determine if other student services are needed and plan future courses. If unable to meet with students in person, the navigator will contact students via phone and/or email.

Along with BAS instructors, navigators will monitor academic progress of each student. If retention services are needed, a plan will be created by the instructor and navigator based on the particular needs of the student. The plan could include academic and personal support

services. The navigator will discuss needs of students with the appropriate student service personnel and monitor the progress of the student.

BASSAS mandatory orientation sessions will discuss the expectations and policies of the program. Recorded sessions will be available to students and parents who can't attend onsite orientations or would like to review the orientation. Students will also be provided with a BASSAS student handbook upon entrance to the program. The handbook will outline the program and include all policies surrounding the program or information where to find the policies on the WWCC website.

The BAS program navigator will initially meet with student services personnel to provide information regarding the BAS programs and explain the nuances of the programs. After initial information meetings, the navigator will hold quarterly BAS update meetings with student services personnel.

BASSAS students will have access to all student services, resources, and activities available at WWCC. Examples of student services and resources are as follows:

Advising and Counseling Center: The Advising and Counseling Center houses career counseling and advising services. Counselors provide academic, career, and personal counseling. The services are free, voluntary, and confidential for WWCC students. Counselors are dedicated to supporting students in their pursuit of academic and personal growth.

Tutoring and Learning Center: Through providing high-quality peer tutoring in a welcoming space, the WWCC Tutoring and Learning Center (TLC) works to increase student success, efficacy, and self-advocacy. Tutoring services are available free of charge to all currently enrolled WWCC students. Tutors provide support in the fields of mathematics, science, writing, and study skills. A vital part of a strong learning community, peer tutors undergo training and professional development in order to provide accessible and accommodating tutoring to fit diverse learning styles and strengths. Tutoring is available for writing by appointment and on a drop-in basis for all other content areas. To ensure all BAS students have tutoring available for upper division courses WWCC plans to partner with the Connecticut Distance Learning Consortium to provide online tutoring assistance to students through eTutoring.

Transcript Evaluation: Full-time evaluators have extensive experience evaluating transcripts from accredited institutions. They will evaluate incoming students for compliance with admission requirements and student records for degree requirements when students near graduation. WWCC is committed to providing efficient time-to-degree for students and makes

every effort to accept prior learning when appropriate.

Online Services: WWCC's website provides online access to campus services such as career information, online registration, financial aid support, and student records. Services are available 24/7 for students not able to drive to campus for face-to-face services.

Financial Aid: The WWCC Financial Aid Office assists students in applying for and accessing financial assistance, including grants, work-study, scholarships, and student loans. Some of the programs available to our students include: Federal Pell Grant, Federal Supplemental Education Opportunity Grant, Washington State Need Grant, Federal and State Work Study and Federal Direct Student Loans.

Disability Support Services: WWCC is committed to providing access and promoting an atmosphere conducive to academic success for all who can benefit from post-secondary education. This includes providing accommodations to WWCC students with disabilities who are otherwise qualified to enroll in courses. WWCC complies with Section 504 of the Rehabilitation Act, the Americans with Disability Act and the ADA Amendment Act that prohibits discrimination on the basis of a disability. An interactive and collaborative process is initiated when the student contacts the Coordinator of Disability Support Services and requests an accommodation.

Resource Center: The Resource Center at WWCC provides support and referral services to current and prospective students. The Center addresses the needs of individuals with personal or educational barriers that may interfere with their pursuit of an education. Staff works with returning adult learners, individuals with disabilities, single parents, displaced homemakers, and beginning college students who need support early in the educational process. Services are provided in three major areas: Financial Assistance, Student Support, and Disability Services. Should a student report a learning disability, they are referred to the Resource Center for counseling and evaluation. If it is determined a student has a verifiable disability, the department will consult with the Resource Center to determine what accommodations may be made to assist the student to remain in the program and be successful. A minimum standard must still be met in all academic, laboratory and clinical work.

Veterans Services: WWCC serves veterans from a number of different programs, as well as dependents of veterans and individuals from the selected reserves. A veteran's education benefit specialist is available to veterans.

Library Services: Students have access to all library resources. Students can also access on-line library databases. These databases include articles appropriate for use by all BAS students conducting research. Remote assistance through email or telephone is available for students

needing help when off campus. The WWCC library is part of Ask-a-Librarian live chat research help service which students can access 24 hours a day seven days a week. The Dean of Library Services and eLearning will research appropriate databases for the BASSAS program. However, the suggested IBISWorld database recommended for the BASAME program will be of use to the BASSAS students as well.

The librarian provides support to the BASSAS Program by teaching classes on database searches, APA formatting, online resources, and other topics as requested. BASSAS students will be required to consult with a librarian to discuss research needs for their capstone projects. When the program has reached student capacity, a .30 FTE librarian will be added to specifically support BAS students. Two librarians on staff hold master's degrees in library science. One of the two will be designated the BAS librarian.

Internet Access and Technology Support: WWCC's Information Technology Services (ITS) provides a variety of services to support students in their learning, research, and other activities. All WWCC students have access to the campus Wi-Fi network. Computer labs are available for student use on campus. Students are encouraged to call the Helpdesk when in need of technical assistance. BAS students will have the option of checking out a laptop computer each quarter.

eLearning: WWCC utilizes *Canvas* for its online learning platform and *Panopto* for lecture capture. BAS instructors will regularly record lectures. All BAS courses will have an accompanying Canvas course site containing course materials, lectures, and additional resources. A campus eLearning director and team provide training and support for faculty and students.

Student Study Space: There are many study spaces throughout the campus, including private study rooms in the campus library which students may reserve.

Crisis Counseling: If a student is having difficulty academically, the appropriate faculty member will counsel the student. If needed, remedial assistance can be assigned to bring a student's grades up to a minimal passing level. Students with personal issues or problems are referred to the Counseling Department.

Criteria 5: Commitment to Build and Sustain a High Quality Program

Walla Walla Community College is well prepared to offer the BAS in Sustainable Agriculture Systems that will serve the needs of our local economy and employers. The new degree will strengthen our professional technical programing and address needed wage progression opportunities.

WWCC is committed to maintaining a BAS degree in Sustainable Agriculture Systems. It is a natural progression for many of WWCC's two-year agriculture graduates who need to stay in the region. Students, employers, and advisory committee members are all strongly supportive of the degree.

WWCC has a strong record of leveraging an array of state and federal grants and contracts to support the development and enhancement of programs and facilities, including but not limited to support from the United States Department of Agriculture, National Science Foundation, Washington State Department of Commerce, and the U.S. Economic Development Administration. WWCC will continue to build this capacity in support of this program and its participants.

Table 11 lists the expenditures for the program. WWCC is also proposing a BAS Applied Management and Entrepreneurship program (BASAME). Many of the expenses for these programs will be shared. The BASSAS and BASAME program have six courses in common. Each program will have 1.5 faculty support bringing the total new faculty to three. Library expenses will also be shared making the total library allocation for years one through four $10,000. In year five when both programs have met capacity, a .3 FTE BAS librarian will be added. Each BAS program will contribute 50% to the BAS librarian.

Good and services, travel, and software, and equipment listed in Table 12 are exclusive to the BASSAS program. The goods and services budget will mainly cover the additional marketing costs for promoting the program. Travel is allocated to the program navigator, assistant dean, and instructors traveling to advertise the new program at state agriculture conferences, other community college agriculture programs as well as high school programs. The instructors will also travel to national conferences to present such as the National Postsecondary Agriculture Schools Conference and the High Impact Technology Exchange Conference.

The BASSAS program will be funded with tuition and fees (see Tables 10 and 12). BAS fees will be assessed at $200 per quarter per student. The $200 fee includes $100 lab fee, $50 technology fee, and a $50 course consumables fee. The technology fee will pay for a portion of the cost of GIS software updates.

Projected Program Enrollment

Table 10 Five Year Enrollment Projections					
Year	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Full-Time Students Start	15	15	18	20	22
Second Year Students Continue		14	14	16	18
Attrition		(1)	(1)	(2)	(2)
Total	15	29	32	36	40

Notes: Cohort Expanded years 2020-2021, 2021-2022, 2022-2023. Full Capacity reached 2022-2023.

Projected Program Expenses

Table 11: BASSAS Budget Expenditures					
	FY2018	FY2019	FY2020	FY2021	FY2022
1 F/T Faculty (3% COLA)	57,000	58,710	60,471	62,285	64,154
0.5 F/T Faculty (3% COLA)		28,500	29,355	30,236	31,143
Hourly/Temp Faculty	5,000	5,000	5,000	5,000	5,000
0.5 BAS Navigator (3% COLA)	24,000	24,750	25,493	26,258	27,045
Benefits (35%)	29,050	39,844	40,987	42,164	43,376
Goods & Services	15,450	15,914	16,391	16,883	17,389
Library Support additional .15 FTE year five	5,000	5,000	5,000	5,000	12,500
Equipment	5,000	5,000	5,000	5,000	5,000
Travel	10,000	10,300	10,609	10,927	11,255
Total Expenditures	$93,500	$193,018	$198,306	$203,753	$216,862

Projected Program Revenue

Table 12: BASSAS Budget Revenue					
	FY2018	FY2019	FY2020	FY2021	FY2022
FT Tuition* (Based on 2017-18 Tuition Rates)	82,530	159,558	176,064	198,072	220,080
BAS Quarterly Fees	9,000	17,400	19,200	21,600	24,000
Application Fees	750	750	900	1,000	1,100
Total Income	92,280	177,708	196,164	220,672	245,180
Total Expenditures	-93,500	-193,018	-198,306	-203,753	-216,862
Total Revenue	-$1220	-$15,310	-$2,142	$16,919	$28,318

*Note: Tuition calculated based on WA State Community College Tuition using program retained FT student quarterly tuition of $1,834.

Program Facilities, Equipment, Technology, and Instructional Resources

Walla Walla Community College has facilities and infrastructure both in place and in planning to house and support the BAS Sustainable Agriculture Systems degree program. The 26,000 ft2 Technology Center (TC) was constructed in 1991. The TC includes six lecture classrooms, nine laboratory classrooms, agriculture and other faculty/instructor offices, 5 computer labs, reception area, and storage space. The TC is used for instruction for students in Agriculture, Water Technologies & Management, Computer Science, and Engineering degree programs.

The 10,800 ft2 Water & Environmental Center (WEC) was constructed 2007 and its 16,000 ft2 instructional wing was added in 2011. The WEC includes two lecture classrooms, one laboratory classroom, faculty/instructor offices, one large and two small conference rooms, two computer labs, reception area with museum displays, and storage space. The WEC is used for instruction for students in Agriculture, Water Technologies & Management, and Engineering degree programs. In addition, as a collaborative facility, the WEC provides office, storage and research laboratory space for five co-located partners: Department of Ecology Watermaster, the state-authorized Walla Walla Watershed Management Partnership, fisheries staff with the Confederated Tribes of the Umatilla Indian Reservation Department of Natural Resources, the nonprofit Sustainable Living Center, and UNIBEST International (for profit soil and water quality testing).

Classrooms in both the TC and WEC include recording capabilities and technology which is updated regularly. Computer labs in the TC and WEC and elsewhere on campus are updated on a regular replacement schedule so students and instructors have continuously updated hardware and software comparable to the equipment graduates will find on the job. In addition, WWCC students receive free access to Office 365, ARCGIS and other professional

software, and free limited printing. At program capacity, the TC and WEC can accommodate the additional BAS courses mornings, afternoons, and/or evenings.

WWCC has been approved to construct a new 16,000 ft2 Science Building which will include state of the art teaching and laboratory classrooms, including the first fully dedicated organic chemistry lab on campus, plus faculty/instructor offices, a reception area, computer labs, and conference rooms.

WWCC also hosts the Agriculture Center of Excellence (ACE), which provides additional benefits. The ACE will strategically market the opportunities of the BASSAS to other students across the state currently studying in the agriculture and natural resources areas. The ACE will also be able to help place BASSAS graduates into high wage, high demand industries through their strong connections to the agricultural sector.

WWCC is committed to supporting ongoing faculty development through faculty participation in national workshops and conferences presented by professional associations such as, but not limited to, the Irrigation Foundation, Agriculture Faculty Academy, Turf Faculty Academy, and the Golf Course Superintendents Association of America. New and advanced software and hardware are continually being introduced in the work place. Because of this, faculty regularly receives training on new software and hardware so they can prepare students to work with the latest technologies.

Criteria 6: Program Specific Accreditation

The institution will not be seeking specialized program accreditation for the BAS in Sustainable Agriculture Systems.

Upon approval of the BASSAS by the state board, WWCC will submit a substantive change application and proposal to the NWCCU.

Criteria 7: Pathway Options Beyond Baccalaureate Degree

WWCC is currently in communication with Washington State University (WSU). WSU is working to create a new Master's of Science degree in Sustainable Agriculture within the next few years, and once that degree is in place, WSU and WWCC would work to create an articulation agreement for WWCC BASSAS students to transfer to WSU's Master's in Sustainable Agriculture. Dr. Derek Brandes, WWCC President and Dr. Richard Zack, WSU Dean of Agriculture, met to discuss the new BASSAS. Dr. Zack was very enthusiastic and complementary of the new program. Once the BASSAS program is approved, Dr. Zack will begin work to change the WSU graduate certificate in sustainable agriculture to a master's degree in sustainable agriculture. The hope is to have the new master's degree completed by the time the first BASSAS students graduate in Spring 2020.

The state-wide articulation agreement with Western Governor's University will allow WWCC BASSAS graduates to pursue several master's degrees. This online option will benefit students who cannot move out of the region to attend WSU.

Criteria 8: External Expert Evaluations

Expert reviews were provided by two university professors from different universities.

The first evaluation is from Kern Ewing, Ph.D., Professor in the School of Environmental and Forest Sciences, University of Washington College of the Environment. Notable comments and recommendations along with WWCC's responses are listed in Table 12. The evaluation in its entirety is located in Appendix C.

The second evaluation is from Mike Swanson, Ph.D., Emeritus Professor, Agriculture and Food Systems, Washington State University. Notable comments have been included in Table 13. Dr. Swanson did not make any recommendations needed a response. The evaluation in its entirely is located in Appendix D along with Dr. Swanson's Curriculum Vitae.

Table 12 Expert Evaluation Kern Ewing, Ph.D.	
Academic Relevance and Rigor	Do the core and elective courses align with employer needs and demands? Are the upper level courses, in particular, relevant to industry? Do the upper level courses demonstrate standard academic rigor for baccalaureate degrees?
	Comment: *Coming from a biology background, I would be more comfortable with an additional upper level biology course in ecology; so much of the regulatory climate within which agricultural workers must operate depends on environmental and ecological issues, and a little ecology would help here.*
	Response: **To include an ecology course, we would note that both Ecology and Environmental Science are electives available to WWCC students pursuing their AAAS degrees; we will strongly advise them to select one or both of these courses within their required 20 credits of electives.**
Overall assessment and recommendations	*Please summarize your overall assessment of the program.*
	Comment: This is an excellent program with a bright future. I would recommend a more active interaction with local employers during the culminating stages of the curriculum. More specifically, I would cast the capstone (SAS 495) as either an internship or capstone. You might allow finishing students to work as a team in the capstone course and take on real clients with actual problems. Teams could present solutions to problems (farm or vineyard management, management and timing of production, etc.) Teams could provide a product (or plan) to the client and potentially work to implement or apply solutions. Doing actual, on-the-ground work would allow students to become that much more prepared for the workforce.
	Response: The SAS495 course description has been changed to reflect that projects will be based on real-life scenarios from our region, and that students may, with advance approval, work in teams on a project.

Table 13 Expert Evaluation Mike Swanson, Ph.D.	
Concept and Overview	*Is the overall concept of the degree program relevant and appropriate to current employer demands as well as to accepted academic standards? Will the program lead to job placement?*
	Comment: I believe that the Sustainable Agriculture Systems degree program will benefit the regions employers. The timing for the proposal is good and should result in employment for its graduates. The SAS program is one way to assist in bridging the gap in needed skilled employees.
	No response needed.
Overall assessment and recommendations	*Please summarize your overall assessment of the program.*
	Comment I would suggest that the proposal receive approval. I believe the need for the SAS Degree program has been established. The industry comments are strong and have been taken into consideration while designing the proposal. The administration and faculty have stepped up and designed courses to meet the demand of industry at the same time established rigor into the proposed program. WWCC has in place assessments of all programs to ensure quality and integrity I see this as an asset to this proposal. Again, I suggest supporting the proposal.
	No response needed.

Appendix A: BASSAS Student Schedule

Bachelor of Applied Science in Sustainable Agriculture Systems Full-Time Student Schedule			
YEAR 3			
Quarter 1	SAS 350 – 5 credits Agricultural Applications of GIS	BIO& 211 – 5 credits Majors Cellular PHIL 330 – 5 credits Professional Ethics	BUS 360 – 5 credits Project Management
Quarter 2	SAS 310 – 5 credits Principles of Sustainability	BIO& 213– 5 credits Majors Plant	SAS 440 – 5 credits Advanced Cropping Systems
Quarter 3	BUS 310 – 5 credits Foundations of Management	BIO& 212– 5 credits Majors Animal	SAS 340 – 5 credits Integrated Pest Management
YEAR 4			
Quarter 4	BUS 350 – 5 credits Entrepreneurial Finance	CHEM 161 or CHEM 121 – 5 credits General Chem I or Intro to Chem	SAS 330 – 5 credits Water, Soil & Energy Conservation
Quarter 5	SAS 420 – 5 credits Advanced Water & Natural Resources Policy	CHEM 162 or CHEM 122 – 5 credits General Chem II or Intro to Organic Chem	BUS 480 – 5 Credits Technical Writing
Quarter 6	SAS 470 – 5 credits Sustainable Agriculture Systems	CHEM 163 or CHEM 123 – 5 credits General Chem III or Intro to Biochem	SAS 495 – 5 credits Capstone Project

Appendix B: Course Descriptions and Learning Outcomes

BUS 310 Foundations of Management & Leadership (5 Credits)

This course is designed to provide students with a broad overview of the foundations of management and leadership from a theoretical and practical perspective. This course focuses on integrating theory into higher level critical thinking allowing managers to apply theory to real world business problem. Topics covered will include terminology, strategies and techniques to manage/lead people, leadership, motivation, team building, change, group dynamics and conflict, as well as entrepreneurial applications for leadership in a start-up.

Learning Outcomes:

- Solve organizational issues by applying theories and concepts
- Assess organizational structure and management strategies required in various business settings and applications
- Design and defend a plan for managing change within an existing organization incorporating management and leadership theory
- Design and justify a management implementation plan for a business start-up

BUS 350 Entrepreneurial Finance (5 Credits)

This course will focus on the financial terminology, concepts and structures of entrepreneurial organizations. Students will understand the relationship between risk and return, cost of capital, start-up structures and governance, and stock/bond valuation. Students will evaluate financial projections and analyze financial statements. The course will also cover how to fund a start-up through angel investors, corporate investment, and private investment. Recommended Pre-requisite AGRI 220 Agriculture Finance.

Learning Outcomes:

- Prepare a financial plan appropriate for a start-up organization
- Analyze and evaluate risks and benefits of funding options available to a start-up organizations
- Create an investment opportunity packet appropriate for interested investors
- Identify and describe a target audience for business start-up proposal
- Present and defend investment opportunity, including financial projections, while using persuasive speaking methods and clear financial information with the purpose of obtaining entrepreneurial investors
- Evaluate business plan proposals

BUS 360 Project Management (5 Credits)

This course provides students with an understanding of the application of project management to both corporations and start-up projects, including the four knowledge areas of scope, time, cost and quality. Students will utilize project management software tools to manage a project while working in a virtual team environment to gain experience working with a global marketplace.

Learning Outcomes

- Construct project plans using the most appropriate project management software
- Solve problems within project plans within project management software
- Evaluate the critical success factors that play a role in the success of a project by applying the four knowledge areas of project management
- Use project management software to monitor the progress and success of an ongoing project
- Compose reports for stakeholders on projected outcomes and deliverables
- Formulate and defend a project plan utilizing a global workforce to maximize flexibility of a start-up organization

BUS 480 Technical Writing (5 Credits)

This course will focus on the practice of preparing technical writing documents for use in the workplace or academic settings. Students will employ various methods of analyzing and writing for different audiences and purposes using traditional and online resources for problem solving, research, documentation and editing. Pre-requisite ENG& 101

Learning Outcomes:

- Compose varied length, ethical, appropriately researched, logically organized and informative written documents that meet intended goals in a given situation
- Employ the theories of document design to improve the readability of technical writing
- Synthesize large amounts of information into readable documents designed for multiple audiences
- Apply word usage appropriate for technical and non-technical audiences
- Interpret and reframe information (statements, visuals, graphs, statistics, etc.) to clearly communicate complex ideas and information
- Compose a resume and letter of introduction

PHIL 330 Professional Ethics

Investigates ethical problems in business through ethical theory and case studies. Involves original research and discussion of business related ethical issues such as social responsibility in corporate governance, proprietary information, whistle-blowers, sustainability as a value system, and equity in hiring and advancement. Pre-Requisite PHIL 131 Introduction to Ethics

- Analyze, explain and evaluate ethical principles and the philosophical arguments that bear on them.
- Apply and justify ethical principles to a broad range of ethical issues in business.
- Distinguish, and develop, and assess varying strategies for dealing with varying cultural perspectives on business related ethical issues.
- Analyze case studies in business ethics and apply and defend ethical principles in evaluating these.
- Evaluate arguments for and against proposed solutions to ethical problems in business practices.
- Explain and defend sustainability as a value system in a business setting

SAS 310 Principles of Sustainability (5 Credits)

Course Description: This course introduces students to the theory, principles, and practices of sustainability. It includes discussions on strategies for overcoming problems in order to establish or maintain ecological and environmental health, create economic welfare, and ensure social justice. Students will examine our relationships to technology, natural resources, natural science, and human development at a local-to-global scale.

Learning Outcomes:

- Define sustainability and identify the key characteristics and relationships of human and natural systems as they pertain to sustainability
- Identify stakeholders and analyze the systems and challenges that connect them
- Analyze and discuss the different and divergent cultural and disciplinary perspectives of sustainability and key challenges to achieving sustainability at local, regional and global scales
- Use indicators and other tools to identify, measure and assess individual and collective sustainability actions
- Propose and defend a viable solution to a particular challenge to sustainability in one's specific field of interest and create a persuasive proposal that advocates this solution

SAS 330 Water, Soil & Energy Conservation (5 Credits)

Course Description: Students will examine and apply cultural practices and technologies used in agricultural systems to reduce water and energy consumption and conserve soil.

Learning Outcomes:

- Identify and explain water and energy efficiency and conservation methods
- Apply principles of the soil water cycle to improve water use efficiency of dryland and irrigated systems
- Develop irrigation schedules using deficit irrigation principles for crops of varying rooting depths
- Use soil resource assessment tools to make land management decisions
- Prepare an erosion mitigation plan for a specific agricultural system
- Explain the basic operating principles of energy conversion practices
- Calculate energy savings and identify environmental impacts for those savings
- Conduct a farm water and energy audit and propose and defend solutions to address inefficiencies identified
- Evaluate information using scientific principles, and synthesize and explain data relating to water, soil and energy conservation issues

SAS 340 Integrated Pest Management (5 Credits)

Course Description: This course will introduce the theory and application of integrated pest management encompassing an array of production systems to include agronomic crops, pasture, non-cropland, turfgrass, aquatic, and urban areas. Students will be required to communicate solutions to current pest problems in a varied collection of production areas using the knowledge and principles gained in this course pertaining to ecologic, economic, and social sustainability.

Learning Outcomes:

- Identify the primary components, principles, and theories of integrated pest management (IPM)
- Apply the components, principles, and theories of IPM to systems level IPM plans
- Compare and contrast various IPM plans and manipulate those plans to provide a recommendation to enhance environmental and economic sustainability
- Design an IPM plan and provide justification for the pest management strategies

SAS 350 Agricultural Applications of GIS (5 Credits)

Course Description: Instruction in advanced topics of GIS focusing on agricultural systems. Emphasis includes geo-spatial analysis, creation and use of geo-databases, geo-referencing, digital elevation models, aerial data, and using ESRI ArcGIS for Desktop software. Prerequisite: ENT 250

Learning Outcomes:

- Create and evaluate soil sample maps
- Develop yield management zones
- Geo-reference photogrammetric images
- Use and analyze multispectral images
- Develop and justify fertilizer prescriptions

SAS 420 Advanced Water & Natural Resources Policy (5 Credits)

Course Description: This course will provide an overview of the political, social, economic, regulatory and administrative systems that affect the use, development, and management of water and land resources. Students will be introduced to past, present and future themes that influence natural resources governance including sustainable development, integrated water resource management, water rights, and land management. These themes will be explored at the local, state and national levels to provide students with a broad understanding of water and natural resources governance issues.

Learning Outcomes:

- Identify basic sources of authority for water and natural resources law, administration and management (i.e., constitutional, statutory, administrative, common law)
- Summarize the sources and uses of water in Washington and describe the technologies that allow individuals and entities to obtain, move, distribute, treat, reuse and dispose of water and wastewaters
- Explain the root sources of difference in water allocation schemes, including historical and institutional roots, in other U.S. states and regions
- Compare and contrast the administrative, legislative, judicial, public outreach processes, planning, financing and market mechanisms used to allocate surface and groundwater and natural resources in Washington among users
- Collaboratively develop strategies promoting sustainable water management solutions and explain and defend these plans in a professional environment
- Evaluate and discuss the assumptions, strengths and weaknesses of various existing water and natural resources policies as well as potential reform measures and their obstacles

SAS 440 Advanced Cropping Systems (5 Credits)

Course Description: Students will apply advanced concepts in agronomic crop production at the local, national, and international scale. Contemporary topics in agriculture will be examined with a focus on social, economic, and ecologic sustainability and production efficiencies. Knowledge from prior coursework will be applied to allow the student to explore multi-faceted solutions to modern challenges in diverse cropping systems. Field trips/site visits will be required.

Learning Outcomes:

- Compare local, national, and international production issues.
- Identify and recommend agronomic practices that could lead to improvements in management of pests, nutrients, and water using systems-scale analysis and development of interdisciplinary solutions.
- Apply prior knowledge of local, national, and international production issues to recommend possible sustainable solutions.
- Discuss and analyze contemporary topics in agriculture with an emphasis on social, economic, and ecologic sustainability and production efficiencies.
- Evaluate and describe local agronomic practices in the field and critique the decisions that led to implementation of these practices.

SAS 470 Sustainable Agriculture Systems (5 Credits)

Course Description: This course examines and applies the environmental, social, and economic components of sustainable farming systems. It emphasizes principles, concepts, and techniques of sustainable production and post-harvest handling of crops, food quality and safety, marketing of products, financing and budgeting, labor issues, and sustainable agriculture policy and regulation. Student will research and choose topic for their capstone project.

Learning Outcomes:

- Differentiate types of sustainable agriculture systems, their origins, and advantages and disadvantages
- Develop and defend soil and nutrient management plans for sustainable crop production that optimize nutrient cycling and minimize environmental degradation
- Design and justify pest management plans that emphasize proactive systems approach and minimize curative control measures
- Integrate cultural practices such as crop rotation and cover cropping into sustainable farming systems
- Formulate and present a finance plan, operating budget, labor plan, and marketing plan for an agribusiness
- Evaluate, quantify and assess the sustainability of an agribusiness

SAS 495 Capstone Project (5 Credits)

Course Description: Students will synthesize and integrate prior knowledge and experiences and apply theory and principles in a real life scenario. Students are provided an opportunity to identify a practical and current sustainable agricultural systems problem, review the literature related to the problem, develop management tactics and strategies to address the problem identified, and communicate their conclusions with others. Students may, with prior approval, work in teams on these projects. Prerequisite SAS 470

Learning Outcomes:

- Apply critical thinking, analysis, and communication skills that integrate the core academic areas of sustainable agricultural systems to a specific problem or case study of the student's choosing
- Create and defend a plan, including tactics and strategies, to address a specific problem at the farm level
- Critique peer presentations and summarize conclusions with other learners in a professional setting

Appendix B: Resume Rubric

Resume Rubric for Bachelor of Applied Science Sustainable Agriculture Systems

Components	Unacceptable – 0 pts	Poor – 1 pt	Good -- 3 pts	Excellent – 5 pts	Total
Presentation/Format/ Spelling/Grammar	• Unbalanced margins • Format detracts from strengths and information • Fonts distract from readability • 10 or more spelling errors • 10 or more grammar errors	• Somewhat balanced margins • Format identifies strengths and information • No variation in fonts and/or point size • 5-9 spelling errors • 5-9 grammar errors	• Balanced margins • Format identifies strengths and information • Appropriate fonts and point size used • 1-4 spelling errors • 1-4 grammar errors	• Balanced margins with eye appeal • Format highlights strengths and information • Appropriate fonts and point size used with variety • No spelling errors • No grammar errors	
Content -- Job/Volunteer Specific information	• Missing key resume sections such as education or experience • No extra information given to enhance resume • Lack of action phrases • Information does not clearly demonstrate ability • to perform an sustainable agriculture related job	• All sections covered with minimal detail • Minimal extra information given to enhance resume • Most duties/skills lack action phrases • Some information demonstrates ability to perform a sustainable agriculture related job	• All sections covered in some detail • Extra information given to enhance resume • A few duties/skills lack action phrases • Information demonstrates ability to perform a sustainable agriculture related job • Some professional terminology used when describing skills	• Career progression evident • All sections covered in detail • Relevant extra information given to enhance resume • Action phrases used to describe duties and skills • Information clearly demonstrates ability to perform a sustainable agriculture related job • Professional • terminology used when • describing skills	
				Total Score	

Appendix C: Reviewer Comments

College Name:	WWCC	**BAS Degree Title:**	BAS in Sustainable Agricultural Systems
Reviewer Name/ Team Name:	Kern Ewing	**Institutional or Professional Affiliation:**	School of Environmental and Forest Sciences, University of Washington
Professional License or Qualification, if any:	Professor	**Relationship to Program, if any:**	None
Please evaluate the following Specific Elements			
a) Concept and overview	Is the overall concept of the degree program relevant and appropriate to current employer demands as well as to accepted academic standards? Will the program lead to job placement?		
	Comment: There appears to be both demand for an applied bachelor's degree and a strong if not consensus view that such a degree would provide proficient and needed workers for the local agricultural based industry.		
b) Degree Learning Outcomes	Do the degree learning outcomes demonstrate appropriate baccalaureate degree rigor?		
	Comment: The outcomes look great. One would hope that they could all be attained by the graduates.		
c) Curriculum Alignment	Does the curriculum align with the program's Statement of Needs Document?		
	Comment: It certainly has the potential to. I have attached some comments about the Capstone Project (I am one of the administrators of the restoration ecology capstone at the University of Washington and have some ideas that might apply to the SAS capstone).		

d) Academic Relevance and Rigor	Do the core and elective courses align with employer needs and demands? Are the upper level courses, in particular, relevant to industry? Do the upper level courses demonstrate standard academic rigor for baccalaureate degrees?
	Comment: Coming from a biology background, I would be more comfortable with an additional upper level biology course in ecology; so much of the regulatory climate within which agricultural workers must operate depends on environmental and ecological issues, and a little ecology would help here.
e) General Education Requirements	Are the general educations requirements suitable for a baccalaureate level program? Do the general education courses meet breadth and depth requirements?
	Comment: They look good to me. I came from an engineering background in which the curriculum was narrowly constrained; I would have enjoyed the breadth that you are offering.
f) Preparation for Graduate Program Acceptance	Do the degree concept, learning outcomes and curriculum prepare graduates to enter and undertake suitable graduate degree programs?
	Comment: Definitely so; an important outcome of a bachelor's degree is to get students to think and reason about things, and this curriculum does a good job at that.
g) Faculty	Do program faculty qualifications appear adequate to teach and continuously improve the curriculum?
	Comment: Faculty looks good. You just need to stay one lecture ahead of the students.
h) Resources	Does the college demonstrate adequate resources to sustain and advance the program, including those necessary to support student and library services as well as facilities?
	Comment: WWCC resources look great, and the support structure looks good. It seems like a very nurturing environment for the kind of student that would be looking for this kind of applied program.
i) Membership and Advisory Committee	Has the program received approval from an Advisory Committee? Has the program responded appropriately to it Advisory Committee's recommendations?

	Comment: I am not aware of interactions with an advisory committee.
j) Overall assessment and recommendations	Please summarize your overall assessment of the program.
	Comment: This is an excellent program with a bright future. I would recommend a more active interaction with local employers during the culminating stages of the curriculum. More specifically, I would cast the capstone (SAS 495) as either an internship or capstone. You might allow finishing students to work as a team in the capstone course and take on real clients with actual problems. Teams could present solutions to problems (farm or vineyard management, management and timing of production, etc.) Teams could provide a product (or plan) to the client and potentially work to implement or apply solutions. Doing actual, on-the-ground work would allow students to become that much more prepared for the workforce.

Reviewer Bio or Resume

Evaluator, please insert a short bio here

I am a professor in the School of Environmental and Forest Sciences, University of Washington College of the Environment. My bachelor's and early work was in civil engineering. I was a city planner and resource planner for a decade, then obtained a PhD in Botany at the University of Washington. I have taught urban ecology and wetland ecology, and most recently have been associated with the development of a curriculum in restoration ecology. Our restoration capstone course has been featured in an article in Science. This year a colleague and I published a paper in Ecological Engineering about incorporating engineering problem-solving into our restoration curriculum.

College Name:	Walla Walla Community College	**BAS Degree Title:**	Sustainable Agriculture Systems
Reviewer Name/ Team Name:	Michael K. Swan, Ph.D.	**Institutional or Professional Affiliation:**	Washington State University, Retired
Professional License or Qualification, if any:	Emeritus Professor, WSU	**Relationship to Program, if any:**	None

Please evaluate the following Specific Elements	
k) Concept and overview	Is the overall concept of the degree program relevant and appropriate to current employer demands as well as to accepted academic standards? Will the program lead to job placement?
	Comment **I believe that the Sustainable Agriculture Systems degree program will benefit the regions employers. The timing for the proposal is good and should result in employment for its graduates. The SAS program is one way to assist in bridging the gap in needed skilled employees.**
l) Degree Learning Outcomes	Do the degree learning outcomes demonstrate appropriate baccalaureate degree rigor?
	Comment **The learning outcomes appear to match well with a baccalaureate degree in rigor and content. Should be a sound degree program.**
m) Curriculum Alignment	Does the curriculum align with the program's Statement of Needs Document?
	Comment **The outlined curriculum fits well with the program's statement of need. I see no problems with the outlined curriculum.**

n) Academic Relevance and Rigor	Do the core and elective courses align with employer needs and demands? Are the upper level courses, in particular, relevant to industry? Do the upper level courses demonstrate standard academic rigor for baccalaureate degrees?
	Comment **The courses appear to match the needs and demands of employers. The upper level courses are aligned closely to what employers want and very relevant to the agricultural industry. The courses appear to demonstrate the rigor of a sound baccalaureate degree program. The outlined courses should enhance the skill levels of students in the program.**
o) General Education Requirements	Are the general educations requirements suitable for a baccalaureate level program? Do the general education courses meet breadth and depth requirements?
	Comment **The general education requirements in the SAS degree program are aligned with many baccalaureate programs in agriculture. The proposal has met the general education requirements well.**
p) Preparation for Graduate Program Acceptance	Do the degree concept, learning outcomes and curriculum prepare graduates to enter and undertake suitable graduate degree programs?
	Comment **The concepts, learning outcomes and curriculum should prepare students to advance into further education and graduate degree programs. The SAS Degree proposal develops a sound base for continuing education.**
q) Faculty	Do program faculty qualifications appear adequate to teach and continuously improve the curriculum?
	Comment

	The faculty outlined are strong and should provide excellent courses. They already have a sound track record of enhancing curriculum and staying abreast with industry and employer demands. This is a strength of this proposal.
r) Resources	Does the college demonstrate adequate resources to sustain and advance the program, including those necessary to support student and library services as well as facilities?
	Comment **Walla Walla Community College has a strong history of supporting the needs of its students and community. I do not see any problems or concerns for the proposed program. A very strong supporter of its students and faculty.**
s) Membership and Advisory Committee	Has the program received approval from an Advisory Committee? Has the program responded appropriately to it Advisory Committee's recommendations?
	Comment **The responses of their survey and design of the program suggests many have assisted in its design. I can see where the suggestions and comments by advisory committee members have been taken into consideration when developing and designing the SAS Degree proposal. They have listened and designed a program with these comments in mind.**
t) Overall assessment and recommendations	Please summarize your overall assessment of the program.
	Comment **I would suggest that the proposal receive approval. I believe the need for the SAS Degree program has been established. The industry comments are strong and have been taken into consideration while designing the proposal. The administration and faculty have stepped up and designed courses to meet the demand of industry at the same time established rigor into the proposed program. WWCC has in place assessments of all programs to ensure quality and integrity I see this as an asset to this proposal. Again I suggest supporting the proposal.**

Michael K. Swan, Ph.D.

Home Addresses:

1520 NW Hall Drive

Pullman, Washington 99163

(509) 592-0040 Cell

Education

DOCTOR OF PHILOSOPHY, Oregon State University, 1990

MASTER OF EDUCATION, Oregon State University, 1984

BACHELOR OF SCIENCE, Washington State University, 1974

Professional Experience (1999 – Present)

2013 – Present Emeritus Professor, Washington State University, Retired

2013 – 2014 Interim Director, Agriculture Center of Excellence
Walla Walla Community College

2003 - 2012 Professor, Tenured, Agricultural & Food Systems
Crop and Soil Science Department 2006- 2012
Department of Biological Systems Engineering 1997-2005
Washington State University, Pullman, Washington

1999 - 2003 Associate Professor, Tenured, Agricultural Technology & Education
Department of Biological Systems Engineering
Washington State University, Pullman, Washington

Teaching Certification

Agricultural Science & Technology, 2010-2015, Oregon (Standard C-319)

Agricultural Science & Technology, 1995-2010, Oregon (Standard C-319)

Vocational Agriculture Certification, 1975-1995, Oregon (Standard C-316)

Agriculture/Natural Resources Education, 1975-1978, Washington

Professional Specialty

Agricultural Education Teacher Training, Agricultural Technology & Management, Vocational Education, Curriculum Development, International Agricultural Development, Student Organizations and Leadership Training, Distance Education Instructional Methods and Strategies, Agricultural Engineering Technology, Computer / Multimedia Instructional Methods, Undergraduate and Graduate Advising, and Inservice Training/Activities.

Publications (Refereed 2006 - 2012)

Swan, M.K. & Olynk-Widmar, N. (2012). Exploring Governance Structures for your Farm Organization (PIG TBD). Fact Sheet Pork Information Gateway and Pork Industry Handbook, United States Pork Center of Excellence, 2012.

Swan, M.K. (2012). Progressive Discipline (PIG TBD) – Fact Sheet Pork Information Gateway and Pork Industry Handbook, United States Pork Center of Excellence, 2012.

Swan, M.K. (2011). Working with Family Members (PIG 03-04-04) – Fact Sheet Pork Information Gateway and Pork Industry Handbook, United States Pork Center of Excellence, 2011.

Swan, M.K. (2011). Conflict Management Skills (PIG 03-05-02) – Fact Sheet Pork Information Gateway and Pork Industry Handbook, United States Pork Center of Excellence, 2010.

Swan, M.K. (2011). Job Satisfaction (PIG 03-01-05) – Fact Sheet Pork Information Gateway and Pork Industry Handbook, United States Pork Center of Excellence, 2010.

Swan, M.K. (2010). Efficient Employee Management (PIG 03-01-03) – Fact Sheet Pork Information Gateway and Pork Industry Handbook, United States Pork Center of Excellence, 2010.

Swan, M.K. (2009). Barriers to Communication (PIG 03-05-04) – Fact Sheet Pork Information Gateway and Pork Industry Handbook, United States Pork Center of Excellence, 2009.

Swan, M.K. (2008). Performance Management Tools (PIG 03-04-02) – Fact Sheet Pork Information Gateway and Pork Industry Handbook, United States Pork Center of Excellence, 2008.

Swan, M.K. (2008). Managing Employees (PIG 03-01-01) – Fact Sheet Pork Information Gateway and Pork Industry Handbook, United States Pork Center of Excellence, 2008.

Swan, M.K. (2007). Creating an Effective Recruitment Advertisement (PIG 03-02-03) – Fact Sheet Pork Information Gateway and Pork Industry Handbook, United States Pork Center of Excellence, 2007.

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