



Program Review Quality Assurance Plan

Quality Assurance Plan for: Bachelor of Horticulture Science (BHS)

Date submitted to SSCPR: March 4, 2021

Date Self-Study Report approved by SSCPR: March 20, 2019

Date of External Review: April 17, 2019

SUMMARY

Summarize what the program has determined - through evidence - about program quality (e.g. strengths, challenges, opportunities for improvement, potential threats, etc.)

The Bachelor of Horticulture Science (BHS) program is a unique undergraduate degree credential with two major specializations (Plant Health and Urban Ecosystems) and one minor (Plant Health) offered through KPU's School of Horticulture (SoH) within KPU's Faculty of Science and Horticulture. The program fulfills the need for both practical "hands-on" skills and academic training that includes inter-disciplinary planning and development of sustainable landscapes and the maintenance of healthy plants. Students engage in critical, creative and collaborative inquiry for innovative working solutions to real-life problems associated with urban ecosystems and plant health protection. The program produces well-prepared graduates that are ready for the diverse needs of employers in the private and public sector of horticulture.

The program benefits its academic home within the School of Horticulture. Strengths of the program were emphasized in the Self-Study Report and from surveys. The Dean noted; "Every member of the SoH has very, very strong ties with the industry. They all belong to industry associations, attend and present at relevant conferences, and many are themselves industry experts. The SoH hosts more school groups than (other) FSH Departments, they have a very strong link to their alumni and many have close ties with other institutions as lecturers, graduate students' supervisors or research collaborators. There are no concerns in this area. In fact, I use the SoH as the role model for external interactions."

Among the challenges for the BHS program are: difficulty with formulation of a streamlined marketing strategy that effectively recruits students, finding additional contract/regular faculty with diversity of industry/government related plant health and urban ecosystems experience, engaging faculty to participate in student-led research in addition to obtaining suitable funding and laboratory space, overlap/duplication of courses/content, and developing additional (advanced) course offerings.

Opportunities for improvement include addressing each of the challenges noted by the external review and continuing to review course outlines to ensure that learning objectives and expected competencies are clear to students. Accreditation of BHS courses with the B.C. Institute of Agrologists would facilitate graduates' membership eligibility and Professional Agrologist (P.Ag) designation.

Potential threats include: lack (or perceived lack) of awareness of the degrees in the broader community, reliance on unique and highly specialized expertise of a limited pool of faculty and limited availability of qualified contract faculty to fill gaps created by recent retirement of several regular faculty.

QUALITY ASSURANCE GOALS

List the program's Quality Assurance Goals (broad statements about what the program intends to accomplish to ensure program quality). Identify the Recommendation(s) – drawn from the **Self-Study Report and External Review Report** - each Goal addresses. Provide a brief Rationale for each Goal (see the Quality Assurance Plan Guidelines for instructions). Add or remove rows as necessary.

GOAL 1: Improve marketing and increase awareness of degree program in the broader community.

RATIONALE FOR THIS GOAL: a) increase student recruitment, b) increase awareness of our degree program with potential employers of our graduates and potential research partners, c) improve program quality within KPU by extending offerings of breadth electives, that include experiential learning, to other departments, c) attract potential faculty to School of Horticulture.

Recommendation(s) this Goal Addresses	Report (page number)
It is recommended that the University provide resources specific to marketing the BHS majors. This should start with a strategic marketing plan.	16, 89
Cross-listing courses will provide efficiency benefits in both majors and attract students from other departments who are seeking breadth electives.	17, 86
Investigate new opportunities for outreach, marketing.	86
Expand the External Program Advisory Committee to build strength and recognition of the degree program.	86
It is strongly recommended the degree majors be included in the Horticulture section of the KPU web calendar and, also, have their own listing.	89

GOAL 2: Improve quality of course offerings and method of delivery.

RATIONALE FOR THIS GOAL: a) better opportunities for students to fully explore and achieve learning outcomes, b) expose students to greater variety of instructor pedagogies and more choices of specialized courses, c) increase program quality within KPU by extending offerings of breadth electives, that include experiential learning.

Recommendation(s) this Goal Addresses	Report (page number)
Students seek training activities that are academically-rigorous and scientifically-based.	16
Cross-listing courses will provide efficiency benefits in both majors and attract students from other departments who are seeking breadth electives.	17, 86
Review the qualifications of current faculty to determine possibility of increasing number of faculty who teach upper level courses.	84, 86
Request for more dedicated space for labs and design work and improved access during and after class hours to reduce overcrowding.	86

GOAL 3: Improve curriculum to increase relevance and meet expectations of students or employers in the discipline/sector.

RATIONALE FOR THIS GOAL: a) increase student recruitment, b) increase awareness of our degree program with potential employers of our graduates and potential research partners, c) better align student expectations with expected learning outcomes, d) add pathway to professional designation for graduates.

Recommendation(s) this Goal Addresses	Report (page number)
Provide a mandatory orientation day for each of the degree disciplines (separately) each Fall, that includes students registered in all four years to ensure they are aware of expectations, opportunities and collegial connections.	84
The work experience course requirement needs to be re-evaluated.	83, 85
Develop and implement practices that increase students' use of advising services early in their program.	83, 85
Engage in substantive discussions with the BC Institute of Agrologists to determine the alignment of the degree programs with the educational requirements of professional certification.	85
Expand External Program Advisory Committee seeking new members.	86
Review BHS majors to establish existing and future levels for credentials including BHS general (no major) and adding Urban Ecosystems minor.	87, 88

GOAL 4: Increase diversity of instruction and course offerings.

RATIONALE FOR THIS GOAL: a) will expose students to greater variety of instructor pedagogies and more choices of specialized courses, b) quality of degree majors/minors will increase by including more upper level specialized courses that more thoroughly span disciplines related to horticulture.

Recommendation(s) this Goal Addresses	Report (page number)
The addition of a required plant physiology course at the 3000 level would be relevant and might benefit students in both programs.	17
Review the qualifications of current faculty to determine possibility of increasing number of faculty who teach upper level courses.	84, 86
Review the current program profile after the faculty review of programs and goals. The relatively low number of upper level elective credits in the degree has been a concern from the inception of program design.	83
For Plant Health: It is a recommendation that a Mycology course be considered as an option	80
For Plant Health: Review curricular profile and content of lower level pest management courses (HORT 1217, 2308, 2333 and 2378) to identify and remove duplication of content	79, 80

GOAL 5: Improve infrastructure to provide high quality learning environment.

RATIONALE FOR THIS GOAL: a) funding levels and allocation of space should more realistically reflect needs of research, b) central school hub would improve interaction/collaboration between faculty and students, c) modern equipment allows industry standard practices to be taught to students.

Recommendation(s) this Goal Addresses	Report (page number)
Review the structure and function of the research courses and critically assess those against the resources currently available for those courses.	85
Request for more dedicated space for labs and design work along with improved access during or after class hours with aim of reducing overcrowding.	86
Find additional or increased financial support for student research.	86
Seek opportunities to centralize the faculty and staff within a central 'School' hub.	86
Continue updating of aging equipment and provision for state-of-the art equipment.	89
Establish better use of Lab 1685 for mutual scheduling of Horticulture, Brewing and Environmental Protection programs.	86

RECOMMENDATIONS THE QUALITY ASSURANCE PLAN DOES NOT ADDRESS

List the Recommendations from the Self-Study and External Review this Plan does not address. Provide a brief rationale for why these Recommendations cannot be addressed. Add or remove rows as necessary.

Recommendations	Report (page number)	Rationale
A number of comments were received about student dis-satisfaction with the services offered by KSA.	86	While this is not within the purview of the School of Horticulture, it is a message that perhaps the wider KPU Administration ought be aware of.

QUALITY ASSURANCE FIVE-YEAR ACTION PLAN

Describe the Quality Assurance Strategies (specific plans of action) the program must achieve to attain its Goal over the next five year. Detail the **steps** the program will take to achieve each Strategy. Add or remove Strategies and tables as necessary.

MONTH/YEAR WHEN THE FIVE-YEAR ACTION PLAN BEGINS: January 2020

STRATEGY 1: Develop strategic marketing plan and update External Program Advisory Committee.

GOAL(S) THIS STRATEGY SUPPORTS: GOAL 1, Improve marketing and increase awareness of degree program in the broader community. Goal 3, Improve curriculum to increase relevance and meet expectations of students or employers in the discipline/sector.

Step(s) Required to Achieve this Strategy	To be Led by	To Begin on (M/YY)	To be Completed By (M/YY)	Notes
Launch advertising/marketing campaign on social media, develop website material in consultation with FSO and Marketing.	Faculty, Co-chairs, Communications/Marketing	04/20	07/21	To be reviewed annually in September.
Maximize new and existing outreach and marketing opportunities.	Co-chairs, Faculty and FSH Events Coordinator	04/20	12/21	Ongoing attendance at industry events and recruitment events. Will be reviewed annually at each December department meeting.
Update KPU web calendar to include degree majors and set up each with their own page.	Faculty, Web coordinator	04/20	04/21	
Refresh/update membership of External Program Advisory Committee	Co-chairs	12/20	02/21	Meet with new/existing representatives.
Update Horticulture website and seek advice on redesign to make it more appealing and informative to potential students and the public.	Co-chairs	01/21	06/21	Revisions and updates urgently needed.
Develop deeper liaison with internal KPU academic departments and non-academic service units to ensure awareness and understanding of the program and the expertise that the School of Horticulture offers. Support the KPU B1 goal as described in Vision 2023 (p.4) "to embrace all cultures and promote a renewed, authentic approach to indigenization" and in Strategy 5.3 of the Academic Plan 2023.	Faculty, Co-chairs	04/20	07/21	Ongoing efforts to embrace goals of Vision 2023 and inclusiveness reviewed annually in September after Faculty of the Whole Meeting.

Increase awareness of the programs to encourage enrolments of students from other departments, (b) build internal support for the programs, (c) provide BHS students opportunities for work experience within wider KPU areas, (d) incorporate indigenization into the activities of the School.	Faculty, Co-chairs	04/20	04/22	
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Resource Implications (if applicable)
What are the resources required to achieve this Strategy? Current budget of \$5000-\$10000 is probably inadequate (Dean has indicated this).
When are these resources required? Immediately and as marketing opportunities arise.
What Faculty and/or Institutional support is required? Lead faculty for Plant Health and Urban Ecosystems will need to supply content and guidance.

STRATEGY 2: Make changes to curriculum that improve quality of course offerings and meet expectations of students in degree programs.

GOAL(S) THIS STRATEGY SUPPORTS: GOAL 1, Improve marketing and increase awareness of degree program in the broader community. Goal 2, Improve quality of course offerings and method of delivery. Goal 3, Improve curriculum to increase relevance and meet expectations of students or employers in the discipline/sector. Goal 4, Increase diversity of instruction and course offerings.

Step(s) Required to Achieve this Strategy	To be Led by	To Begin on (M/YY)	To be Completed By (M/YY)	Notes
Submit School of Horticulture course descriptions to the BC Institute of Agrologists to generate a list of courses from degree program majors that satisfy educational requirements for professional accreditation.	Faculty and Chairs	01/20	06/21	Exact date dependent upon BC Institute of Agrologists.
Update course outlines and look for opportunities to develop new courses and revise existing courses to improve the attractiveness of our graduates to potential employers in the horticulture sector.	Faculty	01/21	07/23	Consultations regarding revision of existing courses and development of new ones ongoing.
Provide augmented computer skills training to help faculty better connect with students by using available teaching and learning technologies such as the Moodle platform.	Faculty and Chairs	01/21	01/22	
It is recommended that in the case of Urban Ecosystems, Learning Outcomes be updated	Faculty and Chairs	01/21	06/21	

Resource Implications (if applicable)
What are the resources required to achieve this Strategy? Online course material support, modernization of technology and training for faculty to encourage implementation of existing and new computer technologies to assist with course delivery.
When are these resources required? Short term within next 2 years.
What Faculty and/or Institutional support is required? Teaching and Learning, IT, Academic Advising, Learning Centre

STRATEGY 3: Improve teaching/learning infrastructure.

GOAL(S) THIS STRATEGY SUPPORTS: Goal 5, Improve infrastructure to provide high quality learning environment.

Step(s) Required to Achieve this Strategy	To be Led By	To Begin on (M/YY)	To be Completed By (M/YY)	Notes
Request capital funds to update laboratory equipment and laboratory space as indicated by faculty.	Chairs and Faculty	01/20	01/25	
Request improved (extended) access to laboratory facilities and infrastructure after normal university working hours to help alleviate scheduling bottlenecks and allow for plant and culture maintenance.	Chairs and Faculty	01/20	06/21	Request pending.
Seek external sponsors or funding to support for student research.	Chairs and Faculty	01/20	07/21	Ongoing funding requests to be reviewed each fall.

Resource Implications (if applicable)
What are the resources required to achieve this Strategy? There is a need to update greenhouses to an acceptable industry standard to allow technical training and skills development that are congruent with expectations of employers that hire our graduates. University laboratory space and equipment is minimally adequate to support growth of programs and will need to be increased as enrolment grows. Increased laboratory space to support a minimum 20 students for coursework and research projects. Access to lab facilities and offices by faculty and staff after normal university operating hours is crucial for research, current access is a severe hindrance.
When are these resources required? Within next 5 years.
What Faculty and/or Institutional support is required? Facilities, Campus Security, Space committee.

STRATEGY 4: Succession planning and faculty recruitment

GOAL(S) THIS STRATEGY SUPPORTS: Goal 2, Improve quality of course offerings and method of delivery. Goal 4, Increase diversity of instruction and course offerings.

Step(s) Required to Achieve this Strategy	To be Led by	To Begin on (M/YY)	To be Completed By (M/YY)	Notes
Update qualified faculty list (QFL) to facilitate hiring of contract and regular instructors with expertise in key academic subjects that comprise courses in both degree majors.	Chairs and Selection committee	01/21	07/21	Limited availability of existing instructors and recent retirements of several regular faculty have increased urgency of updating our QFL.
Selection processes will need to be completed to fill vacancies created by release of faculty in the degree program for university service and potential retirements.	Chairs and Selection committee	01/21	09/21	Qualified faculty list revised and supplemented annually each summer.
Seek opportunities to centralize the faculty and staff within a central 'School' hub.	Chairs	06/21	09/24	

Resource Implications (if applicable)
What are the resources required to achieve this Strategy? Resources may include advertising budget to post positions in periodicals of professional organizations or their newsletters.
When are these resources required? Immediately
What Faculty and/or Institutional support is required? Selection committee, Chairs, Associate Dean/Dean, Marketing, Space committee

PLAN SUPPORTED BY:

Sandy Vanderburgh

March 14, 2021

Provost's Name

Provost's Signature

Date

Elizabeth Worobec
Dean's Name



Dean's Signature

March 4, 2021
Date