Four Year Report (2023)

Oenology and Viticulture
Undergraduate Programs
(reviewed 2017-19)

A. Summary of Review

1. This review was conducted under the terms and conditions of the IQAP approved by Senate on May 25, 2016.

2. The academic programs offered by the Department of Biological Sciences which were examined as part of the review were:

   > BSc (Honours) Co-op
   > Minor
   > Certificate in Grape & Wine Technology

3. The Review Committee consisted of two external reviewers: Thomas Henick-Kling (Washington State University) and Justine Vanden Heuvel (Cornell) and an internal reviewer, David Brown (Brock University).

4. The site visit occurred on March 26-28, 2019.

5. The Final Assessment Report was approved by Senate on November 13, 2019.

6. The reviewers assigned the programs the following outcome categories:

Program(s)	Excellent Quality	Good Quality	Good Quality with Concerns	Non-Viable
BSc (Honours) Co-op	X			
Minor		X *but this isn't a functional program, it's the fallback for students not completing the Co-op*		
Certificate in Grape & Wine Technology		X		

7. The next review of the Oenology & Viticulture undergraduate programs will be in 2025/26.

B: Recommendations

Recommendation #1

The curriculum committee should meet with students to discuss the curriculum. Students suggested that some courses were redundant (i.e., molecular biology and molecular genetics). Soil science and Plant Physiology should be required courses as they are integral to understanding the science of viticulture!

ARC Disposition of the Recommendation
ARC considers the recommendation to be accepted and in the process of implementation. The Committee encourages the program to utilize student feedback in the process of ongoing curriculum review.

Implementation Plan (1ˢᵗ Priority)

Responsible for approving:	Program
Responsible for resources:	Program
Responsible for implementation:	Program
Timeline:	Dean of Mathematics and Science to report by the end of academic year 2019/20

Actions Taken	Year Action Started	Year Action Completed
Action #1 Change calendar requirements to make BIOL 3P50 optional	2020	2020
Action #2 According to student feedback, CHEM 2P21 and CHEM 3P41 were also changed from required to optional	2020	2020
Action #3 Ensure student representative position on Curriculum Committee is filled	2022	Delayed
Action #4 Soil Science and Plant Physiology remain optional in order to meet recommendation 5	2020	2020

Explanation of Actions Taken, Status and Results:
The program committee was able to make progress on many of the recommendations in the first year. Action #3 was delayed due to COVID-19. With the COVID-19 disruption, along with a shortage of faculty due to retirements reduced ability to meet with staff and faculty focusing their already tight resources and time on the required teaching and research. Therefore, the program committee was unable to meet in 2020-2021 regularly. In 2021, the program committee had its Faculty positions filled the demands of the continuing COVID-19 disruption on everyone's time has kept its activities to a minimum. Committee meetings in Fall of 2022 discussed a process to select an OEVI student representative in their 2ⁿᵈ or 3ʳᵈ year to help fill the gap and allow the student to serve for multiple years on the committee. The OEVI undergraduate

committee is currently updating their policies and procedures and will elect a student presentative at the beginning of the next fall term.

Recommendation #2

Further develop a relationship with the business college to enhance course offerings in wine business.

ARC Disposition of the Recommendation
ARC considers the recommendation to be accepted and in the process of implementation. The Committee understand the reviewers' reference to the "business college" to mean the Goodman School of Business.

Implementation Plan (1st Priority)
Responsible for approving: Program
Responsible for resources: Program
Responsible for implementation: Program
Timeline: Dean of Mathematics and Science to report by the end of academic year 2019/20

Actions Taken	Year Action Started	Year Action Completed
Action #1 Discussion with Dean of Goodman School of Business	2021	2022
Action #2 Addition of Goodman representative on program committee	2021	2021

Explanation of Actions Taken, Status and Results:
The initial discussions and addition of a Goodman representative on the committee was delayed due to COVID-19. Dr. Antonia Mantonakis from the Department of Marketing, International Business & Strategy (MIBS) was added as the Goodman representative. Through the work of the Goodman representative on the program committee, two additional business courses were included as list course electives for the Certificate in Grape and Wine Technology: MKTG 4P23 Marketing Communications and MKTG 4P37 Augmented Reality Marketing.

With the addition of a Goodman representative on the committee and additional Goodman courses offered as electives in the program an ongoing channel of communication with the Business school has been created.

Recommendation #3

Consider developing three streams for specialization within the curriculum: Viticulture, Enology, Wine Business/Marketing.
ARC Disposition of the Recommendation
RC considers the recommendation to be accepted and in the process of implementation. The Committee expects that the Unit is best positioned to determine how to incorporate more specialization and increased flexibility into the program.
Implementation Plan (2nd Priority) Responsible for approving: Program Responsible for resources: Program Responsible for implementation: Program Timeline: Dean of Mathematics and Science to report by the end of academic year 2020/21

Actions Taken	Year Action Started	Year Action Completed
Action #1 Program Committee discuss possibility of three streams of specialization.	2020	2020

Explanation of Actions Taken, Status and Results:

The Program has considered the recommendation and decided that there is an insufficient number of students at this time to support 3 formal streams. As part of recommendation 5, the increased flexibility of the program allows students, with the guidance of the Academic Advisor, to specialize by strategic use of increased elective options in the program.

Recommendation #4

Consider having sessionals contribute to faculty-led courses, and faculty contribute to sessional-led courses, so that there is more oversight of content in the sessional-led courses. Consider having CCOVI scientists make a stronger contribution to the teaching program.

ARC Disposition of the Recommendation

ARC considers the recommendation to encourage interaction between faculty and sessional instructors and their courses to be accepted. The Committee considers the recommendation that CCOVI scientists contribute to teaching in the program to be not accepted as it lies outside of the Committee's jurisdiction and has implications with respect to collective agreements at the university.

Implementation Plan (2nd Priority)

Responsible for approving: Program
Responsible for resources: Program
Responsible for implementation: Program
Timeline: Dean of Mathematics and Science to report by the
                                     end of academic year 2020/21

Actions Taken	Year Action Started	Year Action Completed
Action #1 Discussion and consideration in Program Committee.	2022	2022

Explanation of Actions Taken, Status and Results:

This action was delayed due to COVID-19. Faculty currently assigned to teach OEVI courses are all at their maximum teaching load (and in some cases over). It was decided that having full-time Faculty teaching the theory-heavy courses and sessional from the industry teaching the more practical courses of the program is the best solution until more Faculty are hired.

Recommendation #5

More flexibility in the program may be required to attract more students. Investigate opportunities to offer a non co-op stream, particularly targeted at students whom have had substantial experience prior to enrolling in OEVI. This option may help increase enrollment of mature students and transfers from other institutions since time to graduation would be reduced.

ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted and in the process of implementation

Implementation Plan (1st Priority)

Responsible for approving:	Program
Responsible for resources:	Program
Responsible for implementation:	Program
Timeline:	Dean of Mathematics and Science to report by the end of academic year 2019/20

Actions Taken	Year Action Started	Year Action Completed
Action #1 Submit Request for Major Modification for non-coop option to Senate through ARC.	2020	2020

Explanation of Actions Taken, Status and Results:

Senate approved the Major Modification on Nov 13, 2019.

Recommendation #6

Offer a true minor in OEVI (the current minor appears to simply be an opt-out for students who did not successfully complete co-op) to increase enrollment in courses. Lectures could be uncoupled from labs as minors will not need as much hands-on experience

ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted for consideration. The Committee believes that the program is best-qualified to determine the future of the minor once the new non-Co-op stream is in place.

Implementation Plan (2nd Priority)

Responsible for approving:	Program
Responsible for resources:	Program
Responsible for implementation:	Program
Timeline:	Dean of Mathematics and Science to report by the end of academic year 2020/21

Actions Taken	Year Action Started	Year Action Completed
Action #1 Discussion and consideration in Program Committee	2021	2022

Explanation of Actions Taken, Status and Results:
It was decided to keep the minor as it is, as the hands-on teaching that comes with the lab components are integral learning experiences if a graduate will be considered familiar enough with the field of Oenology and Viticulture to achieve a Minor.

Further, CCOVI is continuing to develop a suite of micro-credential courses that are designed to make grape and wine education more accessible to both current students and members of the public. This suite of micro credentials, we feel, will meet the needs of learners that are not served by the current OEVI minor.

Recommendation #7

Build 2 + 2 within Canada and international

ARC Disposition Recommendation
ARC considers the recommendation to be accepted and in the process of implementation.

Implementation Plan (1st Priority)
Responsible for approving: Program
Responsible for resources: Program
Responsible for implementation: Program
Timeline: Dean of Mathematics and Science to report by the end of academic year 2019/20

Actions Taken	Year Action Started	Year Action Completed
Action #1 MOU for 2+2 program near completion with Okanagan College	2020	2021
Action #2 Discussions at preliminary stages with Acadia University for the creation of a 2+2 program	2021	2022
Action #3 Working with International to develop a 2+2 with Northwest University in China	2021	2022

Action #4 Initial discussion with Lincoln University in New Zealand for the creation of a 2+2 program	2021	Ongoing
Action #5 Discussions at preliminary stages with the University of British Columbia Okanagan for the creation of a 2 + 2 program	2021	Delayed

Explanation of Actions Taken, Status and Results:
Action #1: Agreement has been approved by Senate in 2021.

Action # 1-5. Discussions were held with the suggested institutions to pursue 2+2 arrangements. There is some interest from some institutions while others do not appear to be interested. In one case, after working with Brock International, the pursuance of an agreement no longer remains a priority. In other cases, there is a willingness to pursue 2+2 arrangements but there are some instances where dual degree programs may be difficult because undergraduate programs at the partner institution are structured differently than Brock's OEVI program. Discussions will continue to be held with the institutions where there lies some interest and additional discussions will be held with other reputable academic institutions to try to achieve more 2+2 arrangements.

Recommendation #8

Study the possibility of combining OEVI and CCOVI under CCOVI for more efficient use of resources **ARC Disposition of the Recommendation** ARC considers the recommendation to merge OEVI and CCOVI to be not accepted as the structure of CCOVI as a Research Institute does not make this possible. The Committee considers the underlying recommendation to study the possibility of a more efficient use of resources to be accepted. **Implementation Plan (1st Priority)** Responsible for approving: Program Responsible for resources: Program Responsible for implementation: Program Timeline: Dean of Mathematics and Science to report by the end of academic year 2019/20

Actions Taken	Year Action Started	Year Action Completed
Action #1. Ongoing discussions will be scheduled between the OEVI program committee and the Director of CCOVI to see if any additional areas of cooperation can be identified.	2020	Ongoing

Explanation of Actions Taken, Status and Results:
Currently OEVI students have access to the following CCOVI resources: Teaching and Research Winery, Fermentation Lab, Sensory Lab, Meeting Rooms, and Research Labs for training/use in 4th year thesis projects. As well, student made wines, while not able to be sold or consumed, are stored for display in the CCOVI wine cellar. In addition, OEVI students, under the supervision of the CCOVI Outreach Manager, have many volunteer opportunities throughout the year to supplement their co-curricular transcript.

There are continued discussions between the OEVI Academic Advisor and the Director of CCOVI to ensure coordination of resource use.

Recommendation #9

Hire two more faculty to support increased enrollment in the OEVI program. Administration wants the program to grow but it is impossible with the limited faculty. Program appears to currently be running on ~1.5 FTE tenured faculty.

ARC Disposition of the Recommendation
ARC considers the recommendation to be not accepted as it lies outside of the Committee's jurisdiction. The Committee expects that the program will proceed through normal channels of advocacy for faculty resources.

Implementation Plan
Recommendation not accepted.

Recommendation #10

Research thesis should be optional as it requires tremendous faculty resources to offer and delays student graduation. An option of group capstone projects should be considered

ARC Disposition of the Recommendation
ARC considers the recommendation to be accepted for consideration. The Committee expects that the Unit is best positioned to review the issue of more flexibility for students and the best use of faculty resources.

Implementation Plan (2nd Priority)
Responsible for approving: Program
Responsible for resources: Program
Responsible for implementation: Program
Timeline: Dean of Mathematics and Science to report by the
                                    end of academic year 2020/21

Actions Taken	Year Action Started	Year Action Completed
Action #1 Discussion at the Program Committee level.	2020	2021

Explanation of Actions Taken, Status and Results:
This recommendation was considered and subsequently rejected by the Department. The research thesis is considered a key feature of the Honour's degree program. Faculty are currently able to accommodate the number of students in the program. Flexibility of working with CCOVI researchers, fellows and affiliates helps spread the responsibility for supervising students.

C. Unit Summative Analysis and Evaluation

1. **To what extent has the Program achieved the improvements suggested by the reviewers?**
   The program has completed the vast majority of the action items from the 10 recommendations by the reviewers. In total, 8 recommendations have had all action items completed. Recommendation #1 and the action item concerning a student representative will be completed this year. Two action items in Recommendation #7 concerning 2+2 within Canada and internationally were delayed from COVID-19 and discussions are ongoing with the interested institutions. Overall, we feel that the Program has achieved the improvements suggested by reviewers. We did feel to leave the OEVI Minor program as is due to the hands-on nature of the labs as well as the OEVI micro-credential program.

2. **What overall impact has it had on the Program?**
   The recommendations have had a positive impact on the program. It has allowed the program committee to evaluate various aspects on the OEVI program including the minor, increasing capacity with the Goodman School of Business including having a representative from Goodman on the program committee as well as offering more business courses as electives. The 2+2 program is ongoing and hopefully will bear fruit and have positive impacts moving forward as we move past COVID-19 and restrictions.

3. **Is the Program adopting a process of continuous quality improvement for its programs?**
   The program is adopting a process to continuous quality improvement. We are trying to meet regularly as a committee and have ongoing discussions on issues facing the program. The additional capacity with the Goodman representative is an improvement and allowing us to network and communicate more efficiently (we hope) with the respective Deans and Chair in order to deal with issues that arise with cross listed OEVI/MGTG courses that are compulsory or electives for the OEVI students. The review has also reinforced the importance of regular discussions between the OEVI Academic Advisor and the Director of CCOVI to ensure coordination of resource use.

4. **How well do the programs now align with Brock University strategic priorities?**
   The OEVI program has always aligned strongly with Brock's strategic priorities. The program's uniqueness helps meet labour market needs in the grape and wine sector and beyond and provides students with the skills to be successful. The program continues to build high impact practices and experiential learning that increases career and life skills as well as supports the grape and wine industry by supplying co-op students that assist during harvest. The OEVI Honour's program provides students the opportunity to perform independent research that increases research capacity in Faculty research programs, trains HQP and provides beneficial outcomes to the research community, industry and beyond. OEVI has the certificate program (OEVC) and other professional development opportunities including furthering skills for working professionals through developing a suite of micro-credentials and learning opportunities. This helps make grape wine education more accessible to both current students and members of the public including older adults. Through the 2+2 program we hope to increase partnerships with other highly reputable academic institutions to create more opportunities for student and faculty collaboration.

5. **How does this review and its results position the Program as it moves into the next review cycle?**
   This review and its results position the program well as it moves into the next cycle. The OEVI program is unique to Brock. The recommendations of the review and the completed actions strengthens the Program and ensures that the Program continues to be aligned very strongly with Brock's strategic goals as outlined above. With greater representation on the Program committee from GSB the program committee will have an effective communication channel with Goodman and direct insight from faculty to ensure that compulsory wine business courses and elective courses are offered to OEVI students. This will benefit both OEVI and business students with additional course offering such as the ones that were added as electives. Ongoing discussions spurred from this review will help build on 2+2 arrangements created as an outcome of the review and hopefully new partnerships will be created in the future as a result of these efforts. In cases, where some action items were rejected, the committee had thorough discussions and critically evaluated the program to come to these conclusions. Overall, this process will help in the future review and help with the continuous quality improvement of the program and it's changing needs.

D. ARC Final Summary

In final summary of the 2017-2019 cyclical academic review of the programs offered by the Department of Biological Sciences, ARC has determined the following:

1. That the Reviewers' Recommendations have been addressed satisfactorily.

2. That the Program has established a direction for next steps as it prepares for the next review cycle.

3. That the Program has achieved a broad-based, reflective and forward-looking self-assessment.