Carleton UNIVERSITY
Canada's Capital University

Office of the Vice-Provost and
Associate Vice-President
(Academic)

memorandum

DATE: November 29, 2019

TO: Senate

FROM: Dr. Dwight Deugo, Vice-Provost and Associate Vice-President (Academic), and Chair, Senate
         Quality Assurance and Planning Committee

RE: Final Assessment Reports and Executive Summaries

Background
The Final Assessment Reports and Executive Summaries are provided pursuant to articles 4.2.5-4.2.6 of the provincial Quality Assurance Framework and article 7.2.23 of Carleton's Institutional Quality Assurance Process (IQAP). Article 7.2.23.3 of Carleton's IQAP (passed by Senate on June 26th, 2015 and ratified by the Ontario Universities Council on Quality Assurance on September 25th, 2015) stipulates that, in approving Final Assessment Reports and Executive Summaries 'the role of SAPC and Senate is to ensure that due process has been followed and that the conclusions and recommendations contained in the Final Assessment Report and Executive Summary are reasonable in terms of the documentation on which they are based.'

Documentation
Covering memorandums, along with the Final Assessment Reports and Executive Summaries (including the action plans), are provided for consideration and approval.

In making their recommendation to Senate and fulfilling their responsibilities under the IQAP, members of SQAPC were provided with all the appendices listed on page 2 of the Final Assessment Reports and Executive Summaries. These appendices constitute the basis for reviewing the process that was followed and assessing the appropriateness of the outcomes. These appendices are not therefore included with the documentation for Senate. They can, however, be made available to Senators should they so wish.

Omnibus Motion
In order to expedite business with the multiple Final Assessment Reports and Executive Summaries that are subject to Senate approval at this meeting, the following omnibus motion will be moved. Senators may wish to identify any of the programs that they feel warrant individual discussion that will then not be covered by the omnibus motion. Independent motions as set out in the individual memorandums will nonetheless be written into the Senate minutes for those programs that Senators agree can be covered by the omnibus motion.

Senate Motion November 29, 2019

> **THAT** Senate approve the Final Assessment Reports and Executive Summaries arising from the Cyclical Reviews for the programs presented.

Office of the Vice-Provost and
Associate Vice-President
(Academic)

memorandum

DATE: November 7, 2019

TO: Senate

FROM: Dr. Dwight Deugo, Vice-Provost and Associate Vice-President (Academic), and Chair,
               Senate Quality Assurance and Planning Committee

RE: Final Assessment Report and Executive Summary: Undergraduate and Graduate
               Programs in African Studies

The purpose of this memorandum is to request that Senate approve the Final Assessment Report and Executive Summary arising from the cyclical review of the undergraduate and graduate programs in African Studies.

The request to Senate is based on a recommendation from the Senate Quality Assurance and Planning Committee (SQAPC), which passed the following motion at its meeting of October 17th, 2019:

THAT SQAPC recommends to SENATE the approval of the Final Assessment Report and Executive Summary arising from the cyclical program review of the undergraduate and graduate programs in African Studies.

The Final Assessment Report and Executive Summary is provided pursuant to articles 4.2.5-4.2.6 of the provincial Quality Assurance Framework and article 7.2.23 of Carleton's Institutional Quality Assurance Process (IQAP). Article 7.2.23.3 of Carleton's IQAP (passed by Senate on June 26th, 2015 and ratified by the Ontario Universities Council on Quality Assurance on September 25th, 2015) stipulates that, in approving Final Assessment Reports and Executive Summaries 'the role of SAPC and Senate is to ensure that due process has been followed and that the conclusions and recommendations contained in the Final Assessment Report and Executive Summary are reasonable in terms of the documentation on which they are based.'

In making their recommendation to Senate and fulfilling their responsibilities under the IQAP, members of SQAPC were provided with all the appendices listed on page 2 of the Final Assessment Report and Executive Summary. These appendices constitute the basis for reviewing the process that was followed and assessing the appropriateness of the outcomes.

These appendices are not therefore included with the documentation for Senate. They can, however, be made available to Senators should they so wish.

Major modifications described in the Action Plan, contained within the Final Assessment Report, are subject to approval by the Senate Committee on Curriculum, Admission, and Studies Policy, the Senate Quality Assurance and Planning Committee (SQAPC) and Senate as outlined in articles 7.5.1 and 5.1 of Carleton's IQAP.

Once approved by Senate, the Final Assessment Report, Executive Summary and Action Plan will be forwarded to the Ontario Universities' Council on Quality Assurance and to Carleton's Board of

Governors for information. The Executive Summary and Action Plan will be posted
on the website of Carleton University's Office of the Vice-Provost and Associate Vice-President
(Academic), as required by the provincial Quality Assurance Framework and Carleton's IQAP.

Senate Motion November 29, 2019

THAT Senate approve the Final Assessment Report and Executive Summary arising from the Cyclical
Review of the undergraduate and graduate programs in African Studies.

CARLETON UNIVERSITY COMMITTEE ON
QUALITY ASSURANCE

Cyclical Review of the undergraduate and graduate programs in African Studies
Executive Summary and Final Assessment Report

This Executive Summary and Final Assessment Report of the cyclical review of Carleton's undergraduate and graduate programs in African Studies is provided pursuant to the provincial Quality Assurance Framework and Carleton's Institutional Quality Assurance Process (IQAP).

EXECUTIVE SUMMARY

The undergraduate and graduate programs in African Studies resides in Institute of African Studies, a unit administered by the Faculty of Arts and Social Sciences.

As a consequence of the review, the programs were categorised by the Carleton University Committee on Quality Assurance (CUCQA) as being of **GOOD QUALITY** (Carleton's IQAP 7.2.12).

The External Reviewers' report, submitted to Institute of African Studies on April 19th, 2017, offered a very positive assessment of the programs. Within the context of this positive assessment, the report nonetheless made a number of recommendations for the continuing enhancement of the programs. These recommendations were productively addressed by the Director of Institute of African Studies, and the Dean of the Faculty of Arts, and the Dean of the Faculty of Graduate and Postdoctoral Affairs in a response to the External Reviewers' report that was submitted to CUCQA on June 27th, 2018.

An Action Plan detailing how, when and by whom the recommendations will be implemented was received and approved by the Senate Quality Assurance and Planning Committee (SQAPC) on October 17th, 2019.

FINAL ASSESSMENT REPORT

<u>Introduction</u>

The Undergraduate and graduate programs in African Studies resides in the Institute of African Studies, a unit administered by the Faculty of Arts and Social Sciences. This review was conducted pursuant to the Quality Assurance Framework and Carleton's Institutional Quality Assurance Process (IQAP). As a consequence of the review, the programs were categorised by the Carleton University Committee on Quality Assurance (CUCQA) as being of GOOD QUALITY (Carleton's IQAP 7.2.12).

The site visit, which took place on March 9th-10th, 2017 was conducted by Dr. Sheila Petty (University of Regina) and Dr. Bonny Ibhawoh (McMaster University). The site visit involved formal meetings with the Vice-Provost and Associate Vice-President (Academic), the Dean of the Faculty of Arts and Social Sciences, the Dean of the Faculty of Graduate and Postdoctoral Affairs, and the Director of Institute of African Studies. The review committee also met with faculty members, contract instructors, staff, and undergraduate and graduate students.

The External Reviewers' report, submitted on April 19th, 2017, offered a very positive assessment of the program.

This Final Assessment Report provides a summary of:

- Strengths of the programs
- Challenges faced by the programs
- Opportunities for program improvement and enhancement
- The Outcome of the Review
- The Action Plan

This report draws on eight documents:

- The Self-study developed by members of the Institute of African Studies (Appendix A).
- The Report of the External Review Committee (Appendix B).
- Communication from CUCQA regarding the outcome of the external review (Appendix C)
- The response from the Director of Institute of African Studies, the Dean of the Faculty of Arts, and the Dean of the Faculty of Graduate and Postdoctoral Affairs to the Report of the External Review Committee (Appendix D).
- The internal discussant's recommendation report (Appendix E).
- The communication from CUCQA regarding the outcome of the review (Appendix F).
- The program's Action Plan (Appendix G).

Appendix H contains brief biographies of the members of the External Review Committee.

This Final Assessment Report contains the Action Plan (Appendix G) agreed to by the Director of Institute of African Studies, the Dean of the Faculty of Arts, and the Dean of the Faculty of Graduate and Postdoctoral Affairs, regarding the implementation of recommendations for program enhancement that have been advanced as a consequence of the cyclical program review process.

The Action Plan provides an account of who is responsible for implementing the agreed upon recommendations, as well as of the timelines for implementation and reporting.

Strengths of the programs

General

The External Reviewers' Report states that "The African Studies Program at Carleton University is a unique and vibrant program offered by a corps of dedicated and talented scholars and teachers to a cohort of engaged and enthusiastic students. The program is a model of collaboration with interdisciplinarity as the foundation of its structure and the shared philosophy of its members."

Faculty

Speaking with regard to faculty, the external reviewers' stated: "We got the impression from both the faculty and students that the IAS community is a closely-knit and collegial community of faculty and students. Some cross-appointed faculty members remarked that the collaboration and collegiality of the IAS community of faculty and students provides a model for other units across campus" and that the "[f]aculty curricula vitarum submitted to the reviewers demonstrate the high quality of all members attached to the IAS. Productivity, in terms of peer-reviewed publications, academic prizes and tri-council funding (among other indicators), is of a high calibre and helps attract students to the IAS."

Students

The external reviewers noted that "The quality of students in a program is the ultimate determinant of the strength of that program" and that the "collaborative structure of the IAS brings faculty and students together and the value-added interdisciplinarity of faculty research backgrounds ensures the intellectual quality of the student experience."

Curriculum

The external reviewers noted that the "A key strength of the AIS curriculum are the opportunities provided for student experiential learning. The program provides a number of unique opportunities to enable its students to learn in Africa or to learn more about Africa through inter-cultural opportunities in Ottawa. This includes the African Studies Abroad course (AFRI 3100) and the Placement course (AFRI 3900) in Africa. Many of the students we met with expressed their appreciation for these experiential learning courses which enabled them to apply their classroom knowledge in non-academic settings."

Opportunities for program improvement and enhancement

The External Reviewers' Report made 9 recommendations for improvement:

1. Recommendation on improving student enrolment: We recommend that the Director explore ways of getting some representational data on graduate student enrollments.
2. Recommendation on governance: We recommend that the program establish clear terms of reference of mandate and duties for each committee that extend beyond defining membership criteria.
3. Recommendation on curriculum development: We recommend that the program explore the possibilities of introducing a mandatory theory or methods course for IAS students.
4. Recommendation on resources: We recommend that the Dean of the Faculty of Arts and Social Sciences pursue dedicated multi-purpose space for the Institute of African Studies.
5. Recommendation on resources: We recommend that the Dean of the Faculty of Arts and Social Sciences review the current administrative support resources dedicated to the IAS with a view to augmenting them where possible.
6. Recommendation on resources: We recommend that the Dean of the Faculty of Arts and Social Sciences consider allocating some extra support beyond the current course secondment to the IAS Program Director.
7. Recommendation on Library support: We recommend that the Director of IAS explore the possibilities of library support for curating and managing important archival materials donated to the Institute as part of MacOdrum Library's Archives and Research Collections. It is evident that IAS does not have the resources and expertise to do this effectively.
8. Recommendation on student recruitment: The Program should develop a coherent and sustainable plan for recruiting undergraduate students into its programs, retaining them and improving graduation rates. This should be done with all parts of the program governance working in concert – the Management Committee, the Undergraduate Committee, the Curriculum Committee, and the proposed High School/CEGEP Recruitment Committee.
9. Recommendation on communication with students: The program should explore ways of building connection with its student body to facilitate communications and mentoring. This may include informal meet and greet activities, and career development workshops.

The Outcome of the Review

As a consequence of the review, the Undergraduate and graduate programs in African Studies was categorised by the Carleton University Committee on Quality Assurance (CUCQA) as being of **GOOD QUALITY** (Carleton's IQAP 7.2.12).

The Action Plan

The recommendations that were put forward as a result of the review process were productively addressed by the Director of Institute of African Studies, the Dean of the Faculty of Arts, and the Dean of the Faculty of Graduate and Postdoctoral Affairs in a response to the External Reviewers' report that was considered by CUCQA on April 19th,

2017. An Action Plan detailing how, when and by whom the recommendations will be implemented was received and approved by SQAPC on October 17th, 2019.

The Institute was generally pleased with the report and agreed to implement a number of recommendations. The Institute agreed to consider and take action on all of the recommendations presented, and has provided a detailed action plan which notes the timeline and steps being taken to address each of the recommendations.

It is to be noted that Carleton's IQAP provides for the monitoring of action plans. A joint report will be submitted by the academic unit and Faculty Dean, and forwarded to SQAPC for its review. In the case of the undergraduate and graduate programs in African Studies, the majority of monitoring will be achieved by means of an update on the Action Plan, which is expected by January 30th, 2020.

The Next Cyclical Review

The next cyclical review of the undergraduate and graduate programs in African Studies will be conducted during the 2023-2024 academic year.

Quality Assurance Action Plan

INSTITUTE OF AFRICAN STUDIES (Combined Honours, General BA, and Collaborative MA in African Studies)

Completed by: Christine Duff   **Date: 03 June 2019**

Dean or delegate: **Approval date:**

External Reviewer Recommendation	Unit Action Item *	Timeline & Owner	Progress Update
1. Gather representational data on graduate student enrollments.	Compilation of enrollment numbers for AFRI 5000.	Ongoing. Initial survey completed **December 2018** (J. Payne)	2013-2018 figures compiled. Updates will be made yearly.
2. Establish clear terms of reference of mandate and duties for each committee that extend beyond defining membership criteria	Review and update IAS Constitution. • Strike *ad hoc* committee • Committee reviews and updates document. • New document circulated to IAS-affiliated faculty. • New document posted on IAS website.	Summer **2019** (C. Duff) **Fall 2019** **Early 2020** **Early 2020** (J. Payne)	Ongoing
3. Explore possibility of introducing a mandatory theory & methods course for IAS students	Creation of an undergraduate theory and methods course.**	• Interim Director to strike ad-hoc curriculum committee **Spring 2019** • *Ad hoc* Curriculum Committee to create course description and identify course objectives **Summer 2019** • Submit changes **Sept.15, 2019** for approval by FASS & FPA Faculty Curriculum Committees and Faculty Boards. • First course offering in **2020-2021** Academic year	Ongoing
4. Pursuit of dedicated multipurpose space for IAS by Dean of FASS.	Communicate urgent need for physical space (multipurpose and office) to Dean of FASS.	Under discussion since **2017**. Request sent to University Space Committee in **2018** but no decision made. P. Adesanmi followed up with P. Rankin in **December 2018** & **January 2019;** C. Duff followed up with P. Rankin in **June 2019.**	Ongoing

5.	Review by Dean of FASS of the current administrative support resources dedicated to IAS, with a view to augmenting them where possible.	Request additional administrative support from Dean of FASS.	Request sent to Dean of FASS (W. Clement) **June 2017**. F. Ajidahun hired (6-mo. contracts). Current contract extended to **October 31, 2019.** Commitment from Dean Rankin that F. Ajidahun's position will be made permanent sometime during the 2019-20 budget year.	Ongoing
6.	Allocation of extra support beyond the current course secondment to the IAS Program Director.	Discuss with Dean of FASS the possibility of increased course release or creation of Associate Directorship.	Discussed with Dean of FASS (W. Clement) **June 2017** & deemed not feasible at that time. C. Duff revisited issue with P. Rankin **Spring 2019**. P. Rankin confirmed this is not a possibility.	Closed
7.	Explore possibility of library support for curating & managing important archival materials.	Meet with MacOdrum Library to request assistance with managing archives and materials.	P.Adesanmi met with representatives of the MacOdrum Library in **Fall 2016**. The Library has had similar requests from other groups on campus in the past and has always opted to house only items it owns or to which it subscribes. Discussions with Library will be re-opened in **Summer 2019**.	Ongoing
8.	Development of coherent and sustainable plan for recruiting & retaining undergraduate students, and improving graduation rates.	Launch Carleton University Africa Day	C. Sobers submitted initial proposal **Fall 2018** • Anticipated launch: **Fall 2020**	Ongoing
9.	Explore ways of building connection with student body to facilitate communications and mentoring.	Introduce student mentoring program Maintain strong social media presence Continue undergraduate conference, speakers series and IAS Annual Conference	Alumni mentoring implemented **Fall 2017**.	Ongoing

*Will any of the Action Items described above require calendar changes? If yes, please indicate which ones.

Carleton UNIVERSITY

Canada's Capital University

Office of the Vice-Provost and
Associate Vice-President
(Academic)

memorandum

DATE: November 7, 2019

TO: Senate

FROM: Dr. Dwight Deugo, Vice-Provost and Associate Vice-President (Academic), and Chair,
                    Senate Quality Assurance and Planning Committee

RE: Final Assessment Report and Executive Summary: Undergraduate and Graduate
                    Programs in Applied Linguistics and Discourse Studies

The purpose of this memorandum is to request that Senate approve the Final Assessment Report and Executive Summary arising from the cyclical review of the undergraduate and graduate programs in Applied Linguistics and Discourse Studies.

The request to Senate is based on a recommendation from the Senate Quality Assurance and Planning Committee (SQAPC), which passed the following motion at its meeting of October 17th, 2019:

THAT SQAPC recommends to SENATE the approval of the Final Assessment Report and Executive Summary arising from the cyclical program review of the undergraduate and graduate programs in Applied Linguistics and Discourse Studies.

The Final Assessment Report and Executive Summary is provided pursuant to articles 4.2.5-4.2.6 of the provincial Quality Assurance Framework and article 7.2.23 of Carleton's Institutional Quality Assurance Process (IQAP). Article 7.2.23.3 of Carleton's IQAP (passed by Senate on June 26th, 2015 and ratified by the Ontario Universities Council on Quality Assurance on September 25th, 2015) stipulates that, in approving Final Assessment Reports and Executive Summaries 'the role of SAPC and Senate is to ensure that due process has been followed and that the conclusions and recommendations contained in the Final Assessment Report and Executive Summary are reasonable in terms of the documentation on which they are based.'

In making their recommendation to Senate and fulfilling their responsibilities under the IQAP, members of SQAPC were provided with all the appendices listed on page 2 of the Final Assessment Report and Executive Summary. These appendices constitute the basis for reviewing the process that was followed and assessing the appropriateness of the outcomes.

These appendices are not therefore included with the documentation for Senate. They can, however, be made available to Senators should they so wish.

Major modifications described in the Action Plan, contained within the Final Assessment Report, are subject to approval by the Senate Committee on Curriculum, Admission, and Studies Policy, the Senate Quality Assurance and Planning Committee (SQAPC) and Senate as outlined in articles 7.5.1 and 5.1 of Carleton's IQAP.

Once approved by Senate, the Final Assessment Report, Executive Summary and Action Plan will be forwarded to the Ontario Universities' Council on Quality Assurance and to Carleton's Board of

Governors for information. The Executive Summary and Action Plan will be posted
on the website of Carleton University's Office of the Vice-Provost and Associate Vice-President
(Academic), as required by the provincial Quality Assurance Framework and Carleton's IQAP.

Senate Motion November 29, 2019

THAT Senate approve the Final Assessment Report and Executive Summary arising from the Cyclical
Review of the undergraduate and graduate programs in Applied Linguistics and Discourse Studies.

CARLETON UNIVERSITY COMMITTEE ON
QUALITY ASSURANCE

Cyclical Review of the undergraduate and PhD programs in Applied Linguistics and
Discourse Studies
Executive Summary and Final Assessment Report

This Executive Summary and Final Assessment Report of the cyclical review of Carleton's undergraduate and PhD programs in Applied Linguistics and Discourse Studies is provided pursuant to the provincial Quality Assurance Framework and Carleton's Institutional Quality Assurance Process (IQAP).

EXECUTIVE SUMMARY

The undergraduate and PhD programs in Applied Linguistics and Discourse Studies resides in School of Linguistics and Language Studies, a unit administered by the Faculty of Arts and Social Sciences.

As a consequence of the review, the programs were categorised by the Carleton University Committee on Quality Assurance (CUCQA) as being of GOOD QUALITY (Carleton's IQAP 7.2.12).

The External Reviewers' report, submitted to School of Linguistics and Language Studies on July 6th, 2018, offered a very positive assessment of the programs. Within the context of this positive assessment, the report nonetheless made a number of recommendations for the continuing enhancement of the programs. These recommendations were productively addressed by the Director of School of Linguistics and Language Studies, the Dean of the Faculty of Arts and Social Sciences, and the Dean of the Faculty of Graduate and Postdoctoral Affairs in a response to the External Reviewers' report that was submitted to CUCQA on May 23rd, 2019.

An Action Plan detailing how, when and by whom the recommendations will be implemented was received and approved by the Senate Quality Assurance and Planning Committee (SQAPC) on October 17th, 2019.

FINAL ASSESSMENT REPORT

Introduction

The Undergraduate and PhD programs in Applied Linguistics and Discourse Studies resides in the School of Linguistics and Language Studies, a unit administered by the Faculty of Arts and Social Sciences. This review was conducted pursuant to the Quality Assurance Framework and Carleton's Institutional Quality Assurance Process (IQAP). As a consequence of the review, the programs were categorised by the Carleton University Committee on Quality Assurance (CUCQA) as being of GOOD QUALITY (Carleton's IQAP 7.2.12).

The site visit, which took place on May 22nd and May 23rd, 2018 was conducted by Dr. Antoinette Gagne (University of Toronto) and Dr. Heather Graves (University of Alberta). The site visit involved formal meetings with the Vice-Provost and Associate Vice-President (Academic), the Dean of the Faculty of Arts and Social Sciences and Social Sciences, the Dean of the Faculty of Graduate and Postdoctoral Affairs, and the Director of School of Linguistics and Language Studies. The review committee also met with faculty members, contract instructors, staff, undergraduate and graduate students.

The External Reviewers' report, submitted on July 13th, 2018, offered a very positive assessment of the program.

This Final Assessment Report provides a summary of:

- Strengths of the programs
- Challenges faced by the programs
- Opportunities for program improvement and enhancement
- The Outcome of the Review
- The Action Plan

This report draws on eight documents:

- The Self-study developed by members of the School of Linguistics and Language Studies (Appendix A).
- The Report of the External Review Committee (Appendix B).
- Communication from CUCQA regarding the outcome of the external review (Appendix C)
- The response from the Director of School of Linguistics and Language Studies, the Dean of the Faculty of Arts and Social Sciences, and the Dean of the Faculty of Graduate and Postdoctoral Affairs to the Report of the External Review Committee (Appendix D).
- The internal discussant's recommendation report (Appendix E).
- The communication from CUCQA regarding the outcome of the review (Appendix F).
- The program's Action Plan (Appendix G).

Appendix H contains brief biographies of the members of the External Review Committee.

This Final Assessment Report contains the Action Plan (Appendix G) agreed to by the Director of School of Linguistics and Language Studies, the Dean of the Faculty of Arts and Social Sciences, and the Dean of the Faculty of Graduate and Postdoctoral Affairs, regarding the implementation of recommendations for program enhancement that have been advanced as a consequence of the cyclical program review process.

The Action Plan provides an account of who is responsible for implementing the agreed upon recommendations, as well as of the timelines for implementation and reporting.

Strengths of the programs

General

The External Reviewers' Report states that "both the graduate and undergraduate programs in ALDS are strong and provide attractive and innovative options to students seeking a BA or PhD program within the field of applied linguistics and discourse studies."

Faculty

Speaking with regard to faculty, the external reviewers' stated: "Overall the faculty members who contribute to the BA programs and the PhD program seem extremely competent and offering a breadth and wealth of interests and specialties that complement one another and fit well under the ALDS umbrella."

Students

"Of the undergraduates with whom we spoke, they all seemed very satisfied with their BA programs; in fact, several of them (almost half) had enjoyed their undergraduate programs so much that they had applied to and been accepted into the MA program. They were very happy, not merely satisfied."

"the graduate students with whom we spoke emphasized their satisfaction with the level of support (academic, personal, professional, etc.) that their supervisors and committee members have given them."

Curriculum

The external reviewers noted that the "ALDS programs are distinctive in Ontario and nationally. No other institutions combine applied linguistics and discourse studies into undergraduate or graduate programs. The experiential learning components of these programs also make them stand out as innovative in Canada."

Opportunities for program improvement and enhancement

The External Reviewers' Report made 12 recommendations for improvement:

1. Hire administrative staff to run the practicum and help with student advising.
2. Explore ways of running directed reading courses with multiple students, rather than individual meetings.
3. Provide formal recognition for these directed reading courses as extra or as part of regular teaching load.
4. Provide formal recognition for graduate student supervision as extra or regular load teaching.
5. That the administration consider allowing faculty in ALDS to team teach some graduate courses in their specialty areas so that more varied offerings are available to graduate students and faculty can get credit for teaching part of a course (or their turn at being the primary instructor of a team-taught course) without also compromising their regular teaching load (for example, the TESL Certificate program demands consume some ALDS faculty members' whole teaching load).
6. Hire another support staff to assist with advising and to assume responsibility for developing and administering practicum placements in the graduate program(s).
7. Amalgamate both halves of the ALDS programs in one physical location.
8. Expand office and classroom space to provide adequate resources for classroom meetings and instructor/graduate student office space.
9. Renovate some of existing space so that it can function more flexibly (e.g., Room 337 in the St. Patrick Building).
10. Develop or purchase a platform to allow instructors to host the large files (video and data files) associated with the multimodal assignments characteristic of all aspect of these programs. Make sure that faculty and students are given sufficient space to store such large files.
11. Create a second multimedia computer classroom for which ALDS courses have priority of use since a primary focus of the programs is in multimodal communication. Consideration should also be given to improving remote access (via the Cloud) to specialized software required by students and faculty as part of various ALDS courses.
12. Purchase an app such as Zoom to facilitate fully synchronous or blended online meetings or classes. Zoom sessions can be recorded and posted for later reference or viewing by anyone unable to attend a session. Zoom is very flexible and would allow for various types of meetings bringing together those who want to or can meet face-to-face with those who can only join virtually. Such an app would contribute to the sense of community that Year 3 to 5 PhD students feel they need as professors in the PhD program could host monthly meeting bringing together the students in one cohort or across cohorts.
13. Ensure that faculty and students receive training in how to access and use these various software packages, platforms, or apps.
14. Consider making the practicum shorter, more flexible, or optional.
15. That a course focusing on research methodology in ALDS disciplines be developed and offered regularly to ensure students are well prepared to undertake research that will allow them to complete their dissertations.
16. Institute mandatory annual meeting between supervisor and PhD student to ensure satisfactory progress in reaching program milestones.

17. That the trajectory of the graduates of the ALDS PhD be tracked and that brief bios be posted on the program website to give applicants a sense of the diverse professional pathways of the graduates.
18. Develop a plan for hiring additional faculty to address expanded program offerings and potential retirements of senior faculty. Perhaps create one (or more) positions at associate professor level to address upcoming loss of experienced senior faculty.
19. Institute a mandatory check for each student to ensure he/she is progressing towards degree program completion.
20. That the University consider "reclaiming" this program from the private provider so that the ALDS community can benefit from access to the intensive program while the intensive program also become richer as a result.

The Outcome of the Review

As a consequence of the review, the undergraduate and PhD programs in Applied Linguistics and Discourse Studies was categorised by the Carleton University Committee on Quality Assurance (CUCQA) as being of **GOOD QUALITY** (Carleton's IQAP 7.2.12).

The Action Plan

The recommendations that were put forward as a result of the review process were productively addressed by the Director of School of Linguistics and Language Studies, the Dean of the Faculty of Arts and Social Sciences, and the Dean of the Faculty of Graduate and Postdoctoral Affairs in a response to the External Reviewers' report that was considered by CUCQA on May 23rd, 2019. An Action Plan detailing how, when and by whom the recommendations will be implemented was received and approved by the Senate Quality Assurance and Planning Committee (SQAPC) on October 17th, 2019.

The Institute was generally pleased with the report and agreed to implement a number of recommendations. The Institute agreed to consider and take action on 13 recommendations, agreed to take action if resources permit on 6 recommendations and did not agree to 1 recommendation. The unit has provided a detailed action plan which notes the timeline and steps being taken to address each of the recommendations.

It is to be noted that Carleton's IQAP provides for the monitoring of action plans. A joint report will be submitted by the academic unit and Faculty Deans, and forwarded to SQAPC for its review. In the case of the Undergraduate and PhD programs in Applied Linguistics and Discourse Studies, the majority of monitoring will be achieved by means of an update on the Action Plan, which is expected by January 30th, 2020.

The Next Cyclical Review

The next cyclical review of the Undergraduate and PhD programs in Applied Linguistics and Discourse Studies will be conducted during the 2023-2024 academic year.

CARLETON UNIVERSITY
SCHOOL OF LINGUISTICS AND LANGUAGE STUDIES
236 PATERSON HALL
TEL: 520-2802
FAX: 520-6641

MEMORANDUM

DATE: May 2, 2019

TO: Dr. Lorraine Dyke, Vice-Provost and Associate Vice President (Academic);
Chair, Carleton University Committee on Quality Assurance

CC: Dr. Jerry Tomberlin, Interim Provost and Vice President (Academic)
Dr. Dwight Deugo, Assistant Vice President, Office of the Vice Provost
Dr. Pauline Rankin, Dean, Faculty of Art and Social Sciences
Dr. Richard Mann, Associate Dean (Curriculum, Programs and Planning), Faculty of Arts and Social Sciences
Dr. Matthias Neufang, Dean ,Faculty of Graduate and Postdoctoral Affairs
Dr. Jim Opp, Associate Dean, Faculty of Graduate and Postdoctoral Affairs
Christina Noja, Manager, Office of the Vice Provost
Tiffany Douglas, Program Review Officer, Office of the Vice Provost

FROM: Dr. David Wood, Director, School of Linguistics and Language Studies

RE: Action plan in response to the Outcome of Cyclical Review for the Bachelor of
             Arts and PhD programs in Applied Linguistics and Discourse Studies

In response to your memo of February 7th, 2019, informing us of the categorization of our program as **"good quality"** following "a successful review", please find below the Action Plan that you requested.

ALDS Human Resources

1. Hire administrative staff to run the practicum and help with student advising.

   This is a highly desirable goal for SLALS, achievable only with financial support from the Faculty. We rely on one administrative staff member to manage all degree programs and this is is unworkable in our growing school. Having administrative staff deal with practicum placements is also an idea whose time has come, as faculty member are currently spending excessive time and energy on this, at a cost in terms of a focus on

teaching and research. We are ready to initiate this hiring process if/when the Faculty agree to support it.

2. Explore ways of running directed reading courses with multiple students, rather than individual meetings.

This is a readily implemented idea, and the PhD committee is currently ensuring students are made aware of this and faculty are prepared to proceed accordingly.

3. Provide formal recognition for these directed reading courses as extra or as part of regular teaching load.

This would need to be coordinated with workload management planning at the faculty and university level.

4. Provide formal recognition for graduate student supervision as extra or regular load teaching.

See #3 above

5. That the administration consider allowing faculty in ALDS to team teach some graduate courses in their specialty areas so that more varied offerings are available to graduate students and faculty can get credit for teaching part of a course (or their turn being the primary instructor of a team-taught course) without also compromising their regular teaching load.

This is a particular concern in the TESL area, as faculty are so preoccupied with manning existing required courses, they end up giving tutorial courses in addition, to meet student needs. Discussions are underway with the Faculty to consider a hiring strategy in this area to relieve the pressure to staff required courses with full time faculty.

6. Hire another support staff to assist with advising and to assume responsibility for developing and administering practicum placements in the graduate program(s).

See # 1 above.

ALDS Non-Human Resources

7. Amalgamate both halves of the ALDS programs in one physical location.

Space allocations are made beyond the level of school or faculty. In any case, this issue is one of the biggest for the entire school and its many programs. The current situation is a remarkable drag on productivity and collaboration within the school. We have attempted on several occasions already to make our predicament known to the committee responsible for

allocation of space, but with no success. We will continue to work with the Dean of FASS on this issue.

8. Expand office and classroom space to provide adequate resources for classroom meetings and instructor/graduate student office space.

See #7 above.

9. Renovate some of the existing space so that it can function more flexibly (e.g., Room 337 in the St. Patrick Building).

See #7 above

10. Develop or purchase a platform to allow instructors to host the large files (video and data files) associated with the multimodal assignments characteristic of all aspect of these programs. Make sure that faculty and students are given sufficient space to store such large files.

This is an excellent idea for all of SLALS. Resources to make this happen would need to be procured from the faculty or elsewhere in the institution. This will be explored in consultation with Teaching and Learning Services.

11. Create a second multimedia computer classroom for which ALDS courses have priority of use since a primary focus of the programs is in multimodal communication. Consideration should also be given to improving remote access (via the Cloud) to specialized software required by students and faculty as part of various ALDS courses.

See #7 above.

12. Purchase an app such as Zoon to facilitate fully synchronous or blended online meetings of courses.

See # 10 above.

13. Ensure that faculty and students receive training in how to access and use various software packages, platforms, apps.

See # 10 above.

PhD Program

14. Consider making the practicum shorter, more flexible, or optional.

The idea of making the praxis an option, to allow more flexibility in meeting individual student needs and speed progress through the program was rejected by the PhD committee in a fall 2018 meeting. This item remains under discussion but no action is imminent.

15. A course focusing on research methodology in ALDS disciplines be developed and offered regularly to ensure students are well prepared to undertake research which will allow them to complete their dissertations.

Whether ALDS has the staffing flexibility to add such a course is a subject on ongoing discussion in the program.

16. Institute mandatory annual meeting between supervisor and PhD student to ensure satisfactory progress in reaching program milestones

This has already been implemented, with a report form included.

17. That the trajectory of the graduates of the ALDS PhD be tracked and that brief bios be posted on the program website to give applicants a sense of the diverse professional pathways of the graduates.

This has already been implemented and some bios are already appearing on our site.

Undergraduate Program

18. Develop a plan for hiring additional faculty to address expanded program offerings and potential requirements of senior faculty. Perhaps create one (or more) positions at the associate professor level to address the upcoming loss of experienced senior faculty.

First, it must be recognized that it is difficult to discuss "impending faculty retirement" when we do not always know who may be retiring, and we do not ask (to our knowledge, it is not permissible to do so). ALDS has been fortunate to obtain a replacement hire for a retirement over the past year. Going forward, we are engaged in ongoing discussion of how to ensure that ALDS hire for replacement or new positions with a clear view of which areas are in need and which areas stand to grow substantially.

19. Institute a mandatory check for each student to ensure he/she is progressing toward degree program completion.

See # 16 above..

20. That the University consider "reclaiming" this program (intensive ESL) from the private provider so that the ALDS community can benefit from access to the intensive program while the intensive program also becomes richer as well.

SLALS has a joint effort underway with the Global Academy which can readily be mandated to do this, and discussions about strategies for expanding this are ongoing with the Dean of FASS..

Recommendation	Steps to take	Responsible	Timeline
1. Hire administrative staff to run the practicum and help with student advising.	Continue discussing with the Dean of FASS.	Director of SLALS	Ongoing
2. Explore ways of running directed reading courses with multiple students, rather than individual meetings	Set up a procedure	PhD Committee	Partly completed, ongoing
3. Provide formal recognition for these directed reading courses as extra or as part of regular teaching load.	The Director of SLaLS will work with the Dean of FASS to explore ways to make this happen	Director of SLALS	Ongoing
4. Provide formal recognition for graduate student supervision as extra or regular load teaching.	See #3 above	Director of SLALS	Ongoing
5. That the administration consider allowing faculty in ALDS to team teach some graduate courses in their specialty areas so that more varied offerings are available to graduate students and faculty can get credit for teaching part of a course (or their turn being the primary instructor of a team-taught course)	A hiring strategy is needed to allow for this to occur, negotiations with the Dean of FASS are underway	Director of SLALS, Graduate Committee ALDS	Ongoing

without also compromising their regular teaching load.			
6. Hire another support staff to assist with advising and to assume responsibility for developing and administering practicum placements in the graduate program(s).	See #1 above	Director of SLALS	Ongoing
7. Amalgamate both halves of the ALDS programs in one physical location.	Work with Dean of FASS to inform the Space Allocation Committee of this issue.	Director of SLALS	Ongoing
8. Expand office and classroom space to provide adequate resources for classroom meetings and instructor/graduate student office space. *See #7 above.*	See #7 above	Director of SLALS	Ongoing
9. Renovate some of the existing space so that it can function more flexibly (e.g., Room 337 in the St. Patrick Building).	See # 7 above	Director of SLALS	Ongoing
10. Develop or purchase a platform to allow instructors to host the large files (video and data files) associated with the multimodal assignments characteristic of all aspect of these programs. Make sure that faculty and students are	To be undertaken in consultation with Teaching and Learning Services	Director of SLALS, technology in learning manager of SLALS	Fall 2019

given sufficient space to store such large files.			
11. Create a second multimedia computer classroom for which ALDS courses have priority of use since a primary focus of the programs is in multimodal communication. Consideration should also be given to improving remote access (via the Cloud) to specialized software required by students and faculty as part of various ALDS courses.	See #7 above	Director of SLALS	Ongoing
12. Purchase an app such as Zoon to facilitate fully synchronous or blended online meetings of courses.	See # 10 above	Director of SLALS, technology in learning manager of SLALS	Fall 2019
13. Ensure that faculty and students receive training in how to access and use various software packages, platforms, apps	See # 10 above	Director of SLALS, technology in learning manager of SLALS	Ongoing
14. Consider making the PhD practicum shorter, more flexible, or optional.	Has been considered and rejected	PhD Committee	Winter 2019
15. A course focusing on research methodology in	Under consideration	Graduate Committee	Fall 2019

ALDS disciplines be developed and offered regularly to ensure students are well prepared to undertake research which will allow them to complete their dissertations.			
16. Institute mandatory annual meeting between supervisor and PhD student to ensure satisfactory progress in reaching program milestones	Complete, report form included	PhD committee	Winter 2019
17. That the trajectory of the graduates of the ALDS PhD be tracked and that brief bios be posted on the program website to give applicants a sense of the diverse professional pathways of the graduates.	Underway, contacts made and bios appearing	PhD Committee	Ongoing
18. Develop a plan for hiring additional faculty to address expanded program offerings and potential requirements of senior faculty. Perhaps create one (or more) positions at the associate professor level to address the upcoming loss of experienced senior faculty.	ALDS Committee and Director of SLALS are communicating needs to Dean of FASS. One hire at Assistant Professor level is complete.	ALDS Committee, Director of SLALS	Ongoing
19. Institute a mandatory check	See # 16 above	ALDS Committees,	Partly complete

for each student to ensure he/she is progressing toward degree program completion.		Director of SLALS	
20. That the University consider "reclaiming" this program (intensive ESL) from the private provider so that the ALDS community can benefit from access to the intensive program while the intensive program also becomes richer as well.	Negotiate with Global Academy, Provost, and Dean of FASS	Director of SLALS	Ongoing

Carleton University
Canada's Capital University

DATE: November 7, 2019

TO: Senate

FROM: Dr. Dwight Deugo, Vice-Provost and Associate Vice-President (Academic), and Chair,
               Senate Quality Assurance and Planning Committee

RE: Final Assessment Report and Executive Summary: Undergraduate and Graduate
               Programs in Cognitive Science

The purpose of this memorandum is to request that Senate approve the Final Assessment Report and Executive Summary arising from the cyclical review of the undergraduate and graduate programs in Cognitive Science.

The request to Senate is based on a recommendation from the Senate Quality Assurance and Planning Committee (SQAPC), which passed the following motion at its meeting of October 17th, 2019:

THAT SQAPC recommends to SENATE the approval of the Final Assessment Report and Executive Summary arising from the cyclical program review of the undergraduate and graduate programs in Cognitive Science.

The Final Assessment Report and Executive Summary is provided pursuant to articles 4.2.5-4.2.6 of the provincial Quality Assurance Framework and article 7.2.23 of Carleton's Institutional Quality Assurance Process (IQAP). Article 7.2.23.3 of Carleton's IQAP (passed by Senate on June 26th, 2015 and ratified by the Ontario Universities Council on Quality Assurance on September 25th, 2015) stipulates that, in approving Final Assessment Reports and Executive Summaries 'the role of SAPC and Senate is to ensure that due process has been followed and that the conclusions and recommendations contained in the Final Assessment Report and Executive Summary are reasonable in terms of the documentation on which they are based.'

In making their recommendation to Senate and fulfilling their responsibilities under the IQAP, members of SQAPC were provided with all the appendices listed on page 2 of the Final Assessment Report and Executive Summary. These appendices constitute the basis for reviewing the process that was followed and assessing the appropriateness of the outcomes.

These appendices are not therefore included with the documentation for Senate. They can, however, be made available to Senators should they so wish.

Major modifications described in the Action Plan, contained within the Final Assessment Report, are subject to approval by the Senate Committee on Curriculum, Admission, and Studies Policy, the Senate Quality Assurance and Planning Committee (SQAPC) and Senate as outlined in articles 7.5.1 and 5.1 of Carleton's IQAP.

Once approved by Senate, the Final Assessment Report, Executive Summary and Action Plan will be forwarded to the Ontario Universities' Council on Quality Assurance and to Carleton's Board of

Governors for information. The Executive Summary and Action Plan will be posted
on the website of Carleton University's Office of the Vice-Provost and Associate Vice-President
(Academic), as required by the provincial Quality Assurance Framework and Carleton's IQAP.

Senate Motion November 29, 2019

THAT Senate approve the Final Assessment Report and Executive Summary arising from the Cyclical
Review of the undergraduate and graduate programs in Cognitive Science.

CARLETON UNIVERSITY COMMITTEE ON
QUALITY ASSURANCE

Cyclical Review of the undergraduate and graduate programs in Cognitive Science
Executive Summary and Final Assessment Report

This Executive Summary and Final Assessment Report of the cyclical review of Carleton's undergraduate and graduate programs in Cognitive Science is provided pursuant to the provincial Quality Assurance Framework and Carleton's Institutional Quality Assurance Process (IQAP).

EXECUTIVE SUMMARY

The undergraduate and graduate programs in Cognitive Science resides in Institute of Cognitive Science, a unit administered by the Faculty of Arts and Social Sciences.

As a consequence of the review, the programs were categorised by the Carleton University Committee on Quality Assurance (CUCQA) as being of **GOOD QUALITY** (Carleton's IQAP 7.2.12).

The External Reviewers' report, submitted to Institute of Cognitive Science on July 6th, 2018, offered a very positive assessment of the programs. Within the context of this positive assessment, the report nonetheless made a number of recommendations for the continuing enhancement of the programs. These recommendations were productively addressed by the Director of Institute of Cognitive Science, the Dean of the Faculty of Arts, and the Dean of the Faculty of Graduate and Postdoctoral Affairs in a response to the External Reviewers' report that was submitted to CUCQA on May 8th, 2019.

An Action Plan detailing how, when and by whom the recommendations will be implemented was received and approved by the Senate Quality Assurance and Planning Committee (SQAPC) on October 17th, 2019.

FINAL ASSESSMENT REPORT

Introduction

The Undergraduate and graduate programs in Cognitive Science resides in the Institute of Cognitive Science, a unit administered by the Faculty of Arts and Social Sciences. This review was conducted pursuant to the Quality Assurance Framework and Carleton's Institutional Quality Assurance Process (IQAP). As a consequence of the review, the programs were categorised by the Carleton University Committee on Quality Assurance (CUCQA) as being of GOOD QUALITY (Carleton's IQAP 7.2.12).

The site visit, which took place on May 22nd and May 23rd, 2018 was conducted by Dr. Robert Goldstone (Indiana University) and Dr. Steve Joordens (University of Toronto). The site visit involved formal meetings with the Vice-Provost and Associate Vice-President (Academic), the Dean of the Faculty of Arts and Social Sciences, the Dean of the Faculty of Graduate and Postdoctoral Affairs, and the Director of Institute of Cognitive Science. The review committee also met with faculty members, staff, graduate students and alumni.

The External Reviewers' report, submitted on July 6th, 2018, offered a very positive assessment of the program.

This Final Assessment Report provides a summary of:

- Strengths of the programs
- Challenges faced by the programs
- Opportunities for program improvement and enhancement
- The Outcome of the Review
- The Action Plan

This report draws on eight documents:

- The Self-study developed by members of the Institute of Cognitive Science (Appendix A).
- The Report of the External Review Committee (Appendix B).
- Communication from CUCQA regarding the outcome of the external review (Appendix C)
- The response from the Director of Institute of Cognitive Science, the Dean of the Faculty of Arts, and the Dean of the Faculty of Graduate and Postdoctoral Affairs to the Report of the External Review Committee (Appendix D).
- The internal discussant's recommendation report (Appendix E).
- The communication from CUCQA regarding the outcome of the review (Appendix F).
- The program's Action Plan (Appendix G).

Appendix H contains brief biographies of the members of the External Review Committee.

This Final Assessment Report contains the Action Plan (Appendix G) agreed to by the Director of Institute of Cognitive Science, the Dean of the Faculty of Arts and Social Sciences, and the Dean of the Faculty of Graduate and Postdoctoral Affairs, regarding the implementation of recommendations for program enhancement that have been advanced as a consequence of the cyclical program review process.

The Action Plan provides an account of who is responsible for implementing the agreed upon recommendations, as well as of the timelines for implementation and reporting.

Strengths of the programs

General

The External Reviewers' Report states that "the Institute of Cognitive Science at Carleton University provides an attractive option to students that is unique within the Canadian context….Given the current national emphasis on multidisciplinarity and the value associated with topics such as Artificial Intelligence, this program is providing students with important and relevant skills and perspectives that should serve them well and bring credit to the Institute."

Faculty

Speaking with regard to faculty, the external reviewers' stated: "a very passionate group, led by a strong and respected Director, who had already accomplished some amazing things but were also looking for ways to 'up their game' further."

Students

The external reviewers noted that "[t]he graduate degree programs in Cognitive Science at Carleton University offer excellent high-level training in both theoretical and applied cognitive science. The graduate students that we interviewed were enthusiastic about the teaching and mentorship that they have received. They acquire the skills and knowledge necessary to conduct modern interdisciplinary cognitive research."

Curriculum

The external reviewers noted that "It was clear to us that both the faculty and staff that serve this program are committed to providing students with the knowledge and skills they need to have success in their future endeavors and to ultimately bring pride to the Institute and the University more generally. All showed a clear awareness and dedication to using the Cognitive Science context as not only one where a breadth of converging information can be learned, but also one where students are given regular exercise solving problems, thinking critically and creatively, and expressing themselves and their ideas to others. These are learning outcomes in high demand by employers and by institutions of higher learning as well (for those students going on from a Bachelor's or Master's), and when combined with the ability to see issues from several perspectives - the hallmark of Cognitive

Science - we feel your students are being served well." Similarly, at the graduate program review stated that: "Particularly innovative aspects of the cognitive science degree programs are: methodology rotations that expose graduate students to multiple methods in cognitive science that could be employed to further their research, a masters-to-PhD pathway that identifies students most likely to excel in a PhD program and provides them the skills needed for PhD-level work, and an intrinsic interdisciplinary approach not merely for the sake of interdisciplinarity for its own sake, but because the challenges facing society and an understanding of intelligent systems will be necessity require coordinating and collaborating across philosophy, computer science, neuroscience, linguistics, and psychology."

<u>Opportunities for program improvement and enhancement</u>

The External Reviewers' Report made 17 recommendations for improvement:

1. Space - We list this as a single item but there were three distinct needs we noted related to space:

    a. We understand that with IIS leaving the 22nd floor plans are already in place to renovate the entire floor with all of it then available to the Institute of Cognitive Science. Given our suggestions about faculty expansion and the undergraduate space to follow, this will barely be enough. If there are desires to expand the institute further, which is imminently possible with additional marketing, more space will be required. If there was an opportunity to expand in such a way as to bring together the entire Institute including the labs, this would certainly be beneficial for the cohesion and collegiality of cognitive science at Carleton.

    b. The undergraduates emphasized the value of a small seminar-style meeting space, and the faculty also mentioned that a space for collaborations and small working groups could be valuable to them as well. If such a space could be included in the renovations, and if a means could be found to share the space between students and faculty, both groups would be served. Very possibly there would benefits for collegiality and collaborations achieved by bringing together faculty, students, and staff in a multi-purpose collaborative space.

    c. There is a desire to set up an EEG / fNIRS suite in the lab area, and the Director of the Institute has identified a suitable space. This suite could be critical to the research success of cognitive neuroscience faculty while also being a valuable resource for students at all levels. We recommend allocating the necessary resources to realize that suite including any renovations necessary to allow for clean data collection.

2. Faculty Growth - The Institute is strong in Philosophy, Linguistics and Psychology, but not as strong in the areas of Computer Science and Cognitive Neuroscience. Recent hires in Cognitive Neuroscience may fill some of the gap in that area, but we felt an additional hire in this area would also be extremely valuable to both students and the program itself, especially given how active a research area it is. However, even more important at this point is a hire in Computer Science. Students very much want to acquire more skills in this area, and these skills are at a premium both in academic and in industry pathways. Thus, we believe a Computer Scientist with 100% association with the Institute should be a hiring priority, with another Cognitive Neuroscientist (perhaps shared, perhaps not) as a second priority.

3. Although listed third in this list, we feel very strongly that the Undergraduate Administrator position that is not yet permanent should be made permanent as soon as possible. Smaller units have such permanent positions and it was clear to us that the work that is already being performed, along with many of the suggestions we make here, would more than justify making this administrative position permanent.

4. This recommendation is a little more tentative. As alluded to previously we heard complaints from several sources about the slowness and number of hoops associated with the process of applying for ethical approval via the university Research Ethics Board. The feeling was that measures that are important for high risk human research were being applied even to very low risk research, unnecessarily slowing down research projects, even to the point where it was making the completion of honour's theses challenging and frustrating. REBs work a little differently at different institutions (and sometimes depend on the particular constitutions of the committee) and it is not clear how much influence an administration might have over their processes. But if some form of expedited or exempt review could be created for low risk research studies, one that still ensures proper ethical standards for conducting research but is able to do so in much less time, that could eliminate a lot of frustration and allow research to proceed more efficiently.

5. Students desire more exposure to computer science courses (R, Python) and more opportunities in Cognitive Neuroscience. It is possible that recent hires may help with the Cognitive Neuroscience offerings but we recommend an additional hire in Computer Science with 100% appointment to the Institute of Cognitive Science.

6. Only list courses in the Calendar that are actually available. Apparently many of the listed courses are not available and may not be available for some time. Students

find these ambiguities in communication frustrating.

7. The opportunity for engaging in research via Independent Studies courses is not communicated sufficiently at present. Students claimed they only learned about these opportunities through peers and although they are presented in the calendar, the information presented is vague and understated given the value of these courses to them. One possibility would be to reserve an occasion early in the academic year for faculty to "pitch" their research, to give students a better sense of research opportunities. They also felt that a more systematic matching process or technology that connects students to faculty would be valuable. This would also possibly remedy an apparent inequity in the number of honours theses mentored by different faculty members. Currently, the onus of chairing honours theses is falling to heavily on a few faculty members. Students indicated difficulties "connecting the dots" over the first two years of the program. That is, they had difficulties understanding the relevance of the courses they were taking until about the third year when finally the convergences of the different course topics were made clear. Perhaps a "so you feel lost at sea" pamphlet could help, though another idea was to choose some theme central to Cognitive Science (e.g., emotion, intelligence, etc) and have faculty associated with the different pillars give short presentations about how that theme is considered from the perspective of their pillar, thereby providing explicit examples of how these perspectives interrelate and cross- fertilize.

8. Students would very much appreciate the opportunity to interact with more senior and already graduated students, especially alumni who have left academia. They feel such sessions would give them a clearer sense of what one can do with a Cognitive Science degree, and which pathways are best preparations for specific opportunities.

9. In general students found the co-op office not as useful as it could be. They feel that the co-op group does not understand what the Cognitive Science program is all about, and the kinds of skills and knowledge gained in the program and how that prepares them well for certain opportunities. We recommend some form of liaison to the co-op program to bridge that knowledge gap in a way that will make co-op work better for all.

10. The students greatly appreciated the small first year seminar courses. They felt they provided them with direct practice in critical thought, oral communication and written communication at a critical juncture early in their university experience. One comment that produced a lot of resonance came from a student who said "I don't know if I really appreciated that course at the time, but in retrospect it was one of

the most valuable courses I have taken at university". Here our recommendation is straightforward: keep these courses in place if at all possible.

11. The students noted that in the Computer Science department there is a small collaborative drop-in space wherein students can work together on collaborative projects or share information related to courses. They see this space as serving many functions including connecting peers and facilitating information sharing. They indicated that such a space with the Institute of Cognitive Science could serve a similar function and in so doing could enhance the undergraduate experience significantly

12. Generally speaking, we heard about a tension around opportunities for doing research with faculty. The issues around the previously discussed independent studies courses aside, the growing number of students interested in honours thesis projects has grown to a point wherein it is a significant challenging finding enough faculty to supervise projects. New hires will help this, as would the additions we recommend. Perhaps other options should be considered as well, such as greater employment of team projects, or more use of a hierarchical structure that allows senior graduate students to perform some of the supervision duties. Greater involvement of graduate students in project-based training of undergraduate students not only enables more frequent and more personalized training of undergraduates, but also provides valuable mentoring and supervising training for graduate students.

Graduate Level

1. Some incoming graduate students did their undergraduate work in the Institute of Cognitive Science and Carleton, and some did not. Currently all of these students are required to take courses that introduce them to Cognitive Science, courses that the returning students feel are unnecessary for them. They would appreciate some option of being exempted from these courses (e.g., testing out?) so they could take other courses they feel would be more interesting or relevant for them. If this option is already available, then they are not aware of it, and these options should be made more apparent.

2. Echoing the undergraduates, the graduate students also indicated a desire for more advanced coursework in the areas of Computer Science (especially AI and Machine Learning) and Cognitive Neuroscience. This convergence across students is represented in our hiring recommendations above.

3. Also similar to their undergraduate peers, the graduate students indicated a desire to hear from and interact with those who went before them. They would appreciate events in which alumni and others who are applying cognitive science in industry and government visited the program to describe what they are doing now, and what they wished they had known as graduate students now that they see things from a workforce position. Perhaps some form of homecoming event (at the Institute level) could accomodate the desires of both the undergraduate and graduate communities while bringing together the "Institute Community" as a whole. We understand there is already a Spring Conference wherein current students present their work; perhaps a "Cognitive Science Careers" workshop could be part of that event, allowing different groups to have a turn "taking the floor" and presenting their perspectives. NOTE: This would necessitate some means of tracking alumni and keeping the communication channels open with them. There are other potential benefits (success statistics, fundraising, etc) for improving alumni tracking. Three other mechanisms worth considering for strengthening the connection between the Institute and alumni are: 1) institute an award for outstanding alumni achievement, 2) create a periodic cognitive science newsletter that is sent to current students and faculty as well as alumni, and 3) constitute an advisory board for the Institute including alumni as well as local representatives from industries related to cognitive science.

4. We understand that there currently is a weekly Cognitive Science colloquium series, but that attendance is spotty, and perhaps the meetings are not as regular as they should be. We previously highlighted the power of the first year seminar courses for undergraduates. These colloquia should perhaps be seen as the "other bookend" of this same experience for graduates. We recommend that all graduate students be required to attend, perhaps even listing it as a course with pass/fail grading based on attendance. Students should be encouraged to present their work at this venue, as should faculty from the Institute. These contexts are important for continuing the development of critical thought in students, fostering a collegial and interactive intellectual atmosphere, and providing practice with clear and effective communication.

5. Carleton's graduate degree programs are some of the few programs to offer stand-alone degrees in cognitive science not dependent or housed within another department. Furthermore, several of the faculty have attained international prominence for their cutting-edge research in cognitive science. Given Carleton's competitive advantage in cognitive science, we were surprised by the relatively low number of graduate applications for both the Master's and PhD degrees. The number of applications is lower than would expected for a program of Carleton's

stature and the relative popularity of cognitive science as a field compared to the small number of universities offering degrees in cognitive science. Even if growth is not desired at this point, the uniqueness and value of this program should be promoted more widely with the goal of increasing the quality of students in the Institute. Again, the training students receive is extremely valuable and relevant given current trends in AI, Machine Learning, Big Data, and online interactions, and there is every reason to believe that good marketing could result in significantly more applications at the graduate level, and even at the undergraduate level. As the quality of the cohort increases so too does research output, external funding, and collaborations.

The Outcome of the Review

As a consequence of the review, the undergraduate and graduate programs in Cognitive Science was categorised by the Carleton University Committee on Quality Assurance (CUCQA) as being of **GOOD QUALITY** (Carleton's IQAP 7.2.12).

The Action Plan

The recommendations that were put forward as a result of the review process were productively addressed by the Director of Institute of Cognitive Science, the Dean of the Faculty of Arts and Social Sciences, and the Dean of the Faculty of Graduate and Postdoctoral Affairs in a response to the External Reviewers' report that was considered by CUCQA on May 8th, 2019. An Action Plan detailing how, when and by whom the recommendations will be implemented was received and approved by the Senate Quality Assurance and Planning Committee (SQAPC) on October 17th, 2019.

The Institute was generally pleased with the report and agreed to implement a number of recommendations. The Institute agreed to consider and take action on all of the recommendations #1, U3-8, and G4-5, and will agree to take action should resources permit on A2, U1, U9, G1 and G3. Recommendations A4, U2 and G2 were cited as out of the department's control. The unit has provided a detailed action plan which notes the timeline and steps being taken to address each of the recommendations.

It is to be noted that Carleton's IQAP provides for the monitoring of action plans. A joint report will be submitted by the academic unit and Faculty Dean, and forwarded to SQAPC for its review. In the case of the Undergraduate and graduate programs in Cognitive Science, the majority of monitoring will be achieved by means of an update on the Action Plan, which is expected by January 30th, 2020.

The Next Cyclical Review

The next cyclical review of the Undergraduate and graduate programs in Cognitive Science will be conducted during the 2021-2022 academic year.

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Quality Assurance Action Plan

Cognitive Science

Program Cycle: 2016-17

Completed by: Mark MacLeod   Date: July 2, 2019

Dean or delegate: Pauline Rankin   Approval date: July 15, 2019

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External Reviewer Recommendation	Unit Action Item *	Timeline & Owner
A1. Space a. That with IIS leaving the 22nd floor plans are already in place to renovate the entire floor with all of it then available to the Institute of Cognitive Science. Given our suggestions about faculty expansion and the undergraduate space to follow, this will barely be enough. If there are desires to expand the Institute further, which is imminently possible with additional marketing, more space will be required. If there was an opportunity to expand in such a way as to bring together the entire Institute including the labs, this would certainly be beneficial for the cohesion and collegiality of cognitive science at Carleton.	When the 22nd floor is available, we will have sufficient office space for all current faculty members and staff.	Sept. 2019 Space Committee Approval Dean's Approval
b. The undergraduates emphasized the value of a small seminar-style meeting space, and the faculty also mentioned that a space for collaborations and small working groups could be valuable to them as well. If such a space could be included in the renovations, and if a means could be found to share the space between students and faculty, both groups would be served. Very possibly there would benefits for collegiality and collaborations achieved by bringing together faculty, students, and staff in a multipurpose collaborative space.	See above – a small seminar room will be created from the space currently occupied by the main office. Students will be able to book the seminar room for working together.	Sept 2019 (as above) Space Committee Approval Dean's Approval
c. There is a desire to set up an EEG / fNIRS suite in the lab area, and the Director of the Institute has identified a suitable space. This suite could be critical to the research success of cognitive neuroscience faculty while also being a valuable resource for students at all levels. We recommend allocating the necessary resources to realize that suite including any renovations necessary to allow for clean data collection.	Jouravlev, Muldner, & Herdman were successful in obtaining a CFI grant to set up this suite. Space is available in VSIM 2nd floor. Plans are underway to renovate and acquire the equipment.	Space ready and equipment obtained by Sept 2019. Jouravlev, Muldner to find equipment. Herdman coordinating space renovations.

A2. Faculty Growth - The Institute is strong in Philosophy, Linguistics and Psychology, but not as strong in the areas of Computer Science and Cognitive Neuroscience. Recent hires in Cognitive Neuroscience may fill some of the gap in that area, but we felt an additional hire in this area would also be extremely valuable to both students and the program itself, especially given how active a research area it is. However, even more important at this point is a hire in Computer Science. Students very much want to acquire more skills in this area, and these skills are at a premium both in academic and in industry pathways. Thus, we believe a Computer Scientist with 100% association with the Institute should be a hiring priority, with another Cognitive Neuroscientist (perhaps shared, perhaps not) as a second priority.	1. Tier 2 CRC Chair split with Psychology "Cognition and Wellness"; this position will support the department in general, but will contribute little to teaching resources. 2. Replacement position for Ash Asudeh with expertise in Computational Modeling (and ability to teach AI courses). 3. New position in Cognitive Neuroscience, 100% in ICS.	1. Advertising in Summer/Fall 2019; Appointment would be for July of 2021. 2. Advertising in Fall 2019; Appointment for July 2020. Dean's approval 3. Not approved for 2019-20
A3. Undergraduate Administrator Position. Although listed third in this list, we feel very strongly that the Undergraduate Administrator position that is not yet permanent should be made permanent as soon as possible. Smaller units have such permanent positions and it was clear to us that the work that is already being performed, along with many of the suggestions we make here, would more than justify making this administrative position permanent. Unfortunately, this position was not approved for base funding in the 2018-19 budget submission	This position was approved and funded by the Dean's office. The hiring committee interviewed in June. Position was filled for July 1st.	No further action needed.
A4. Ethics. This recommendation is a little more tentative. As alluded to previously we heard complaints from several sources about the slowness and number of hoops associated with the process of applying for ethical approval via the university Research Ethics Board. The feeling was that measures that are important for high risk human research were being applied even to very low risk research, unnecessarily slowing down research projects, even to the point where it was making the completion of honour's theses challenging and frustrating. REBs work a little differently at different institutions (and sometimes depend on the particular constitutions of the committee) and it is not clear how much influence an administration might have over their processes. But if some form of expedited or exempt review could be created for low risk research studies, one that still ensures proper ethical standards for conducting research but is able to do so in much less time, that could eliminate a lot of frustration and allow research to proceed more efficiently.	Not under the unit's control.	No action needed.

External Reviewer Recommendation	Unit Action Item *	Timeline & Owner
U1. Students desire more exposure to computer science courses (R, Python) and more opportunities in Cognitive Neuroscience. It is possible that recent hires may help with the Cognitive Neuroscience offerings but we recommend an additional hire in Computer Science with 100% appointment to the Institute of Cognitive Science	See item A2 above.	
U2. Only list courses in the Calendar that are actually available. Apparently many of the listed courses are not available and may not be available for some time. Students find these ambiguities in communication frustrating.	Not clear what courses were meant here. All cognitive science courses up to 4th year are available every year. Graduate courses are available every 2nd year. CGSC 5001 has not been offered for a few years but alternatives have been available.	Unclear what the problem is. It is unclear which students raised this issue.
U3. The opportunity for engaging in research via Independent Studies courses is not communicated sufficiently at present. Students claimed they only learned about these opportunities through peers and although they are presented in the calendar, the information presented is vague and understated given the value of these courses to them. One possibility would be to reserve an occasion early in the academic year for faculty to "pitch" their research, to give students a better sense of research opportunities. They also felt that a more systematic matching process or technology that connects students to faculty would be valuable. This would also possibly remedy an apparent inequity in the number of honours theses mentored by different faculty members. Currently, the onus of chairing honours theses is falling to heavily on a few faculty members.	Students appear to be talking about two different things here: Independent Studies courses, which are rare; and the Honours Thesis course. While both involve independent supervision by a faculty member, we typically do not advertise Independent Study courses because of the burden it would place on faculty resources. We do already have a course in place, CGSC 3908, which helps prepare students for the Honours Thesis, and faculty members already visit this course to "pitch" their research.	No action needed.
Students indicated difficulties "connecting the dots" over the first two years of the program. That is, they had difficulties understanding the relevance of the courses they were taking until about the third year when finally the convergences of the different course topics were made clear. Perhaps a "so you feel lost at sea" pamphlet could help, though another idea was to choose some theme central to Cognitive Science (e.g., emotion, intelligence, etc) and have faculty associated with the different pillars give short presentations about how that theme is considered from the perspective of their pillar, thereby providing explicit examples of how these perspectives interrelate and crossfertilize.	The CGSC 2001 course has been restructured such that it will function less as an introduction and more as a course that will help students pull together the different areas. In addition, a prerequisite has been added (CGSC 1001). *	Undergraduate supervisor. Rename CGSC 2001 (Summer 2019).

External Reviewer Recommendation	Unit Action Item *	Timeline & Owner
U5. Students would very much appreciate the opportunity to interact with more senior and already graduated students, especially alumni who have left academia. They feel such sessions would give them a clearer sense of what one can do with a Cognitive Science degree, and which pathways are best preparations for specific opportunities	We plan to organize periodic Career talks. We will be reaching out to the CSSA for planning support.	Co-op supervisor will organize these sessions.
U6. In general students found the co-op office not as useful as it could be. They feel that the co-op group does not understand what the Cognitive Science program is all about, and the kinds of skills and knowledge gained in the program and how that prepares them well for certain opportunities. We recommend some form of liaison to the co-op program to bridge that knowledge gap in a way that will make co-op work better for all.	Our Co-op supervisor is aware of these issues and is in regular contact with the Co-op office.	No further action needed.
U7. The students greatly appreciated the small first year seminar courses. They felt they provided them with direct practice in critical thought, oral communication and written communication at a critical juncture early in their university experience. One comment that produced a lot of resonance came from a student who said "I don't know if I really appreciated that course at the time, but in retrospect it was one of the most valuable courses I have taken at university". Here our recommendation is straightforward: keep these courses in place if at all possible.	We will continue to offer our three sections of FYSM 1607.	No action needed.
U8. The students noted that in the Computer Science department there is a small collaborative drop-in space wherein students can work together on collaborative projects or share information related to courses. They see this space as serving many functions including connecting peers and facilitating information sharing. They indicated that such a space with the Institute of Cognitive Science could serve a similar function and in so doing could enhance the undergraduate experience significantly.	see item A1(b), above.	

External Reviewer Recommendation	Unit Action Item *	Timeline & Owner
U9. Generally speaking, we heard about a tension around opportunities for doing research with faculty. The issues around the previously discussed independent studies courses aside, the growing number of students interested in honours thesis projects has grown to a point wherein it is a significant challenging finding enough faculty to supervise projects. New hires will help this, as would the additions we recommend. Perhaps other options should be considered as well, such as greater employment of team projects, or more use of a hierarchical structure that allows senior graduate students to perform some of the supervision duties. Greater involvement of graduate students in project-based training of undergraduate students not only enables more frequent and more personalized training of undergraduates, but also provides valuable mentoring and supervising training for graduate students.	We have not had students expressing this to us directly. All honours students who are qualified and who want to do honours theses are accommodated. Many students volunteer in labs prior to their thesis year.	Undergraduate supervisor/administrator will continue to provide information to students. Participation in the 3rd year honours class (CGSC 3908) will continue to be a pathway to research activities.
G1. Some incoming graduate students did their undergraduate work in the Institute of Cognitive Science and Carleton, and some did not. Currently all of these students are required to take courses that introduce them to Cognitive Science, courses that the returning students feel are unnecessary for them. They would appreciate some option of being exempted from these courses (e.g., testing out?) so they could take other courses they feel would be more interesting or relevant for them. If this option is already available, then they are not aware of it, and these options should be made more apparent.	All incoming graduate students are encouraged to meet with the graduate supervisor to choose courses. Exceptions and/or alternative courses are chosen on a case-by-case basis.	Graduate supervisor.
G2. Echoing the undergraduates, the graduate students also indicated a desire for more advanced coursework in the areas of Computer Science (especially AI and Machine Learning) and Cognitive Neuroscience. This convergence across students is represented in our hiring recommendations above.	See item A2, above. Our 4th year course will be moved to 3rd year (i.e., CGSC 4001 will be renamed and renumbered as CGSC 3xxx).* A new 4th year/graduate course will be created that will be project based.*	Undergraduate supervisor/administrator (Summer 2019).

External Reviewer Recommendation	Unit Action Item *	Timeline & Owner
G3. Also similar to their undergraduate peers, the graduate students indicated a desire to hear from and interact with those who went before them. They would appreciate events in which alumni and others who are applying cognitive science in industry and government visited the program to describe what they are doing now, and what they wished they had known as graduate students now that they see things from a workforce position. Perhaps some form of homecoming event (at the Institute level) could accomodate the desires of both the undergraduate and graduate communities while bringing together the "Institute Community" as a whole. We understand there is already a Spring Conference wherein current students present their work; perhaps a "Cognitive Science Careers" workshop could be part of that event, allowing different groups to have a turn "taking the floor" and presenting their perspectives. NOTE: This would necessitate some means of tracking alumni and keeping the communication channels open with them. There are other potential benefits (success statistics, fundraising, etc) for improving alumni tracking. *Three other mechanisms worth considering for strengthening the connection between the Institute and alumni are: 1) institute an award for outstanding alumni achievement, 2) create a periodic cognitive science newsletter that is sent to current students and faculty as well as alumni, and 3) constitute an advisory board for the Institute including alumni as well as local representatives from industries related to cognitive science.*	We plan to organize periodic Career talks. We will be reaching out to the graduate student organization for planning support. We are in the planning stages for publishing an annual Institute newsletter. The newsletter will provide faculty and student updates, and will be targeted at current students, alumni, and prospective students.	Graduate supervisor/graduate committee (Career talks). Graduate and Undergrad admin staff (Newsletter).

External Reviewer Recommendation	Unit Action Item *	Timeline & Owner
G4. We understand that there currently is a weekly Cognitive Science colloquium series, but that attendance is spotty, and perhaps the meetings are not as regular as they should be. We previously highlighted the power of the first year seminar courses for undergraduates. These colloquia should perhaps be seen as the "other bookend" of this same experience for graduates. We recommend that all graduate students be required to attend, perhaps even listing it as a course with pass/fail grading based on attendance. Students should be encouraged to present their work at this venue, as should faculty from the Institute. These contexts are important for continuing the development of critical thought in students, fostering a collegial and interactive intellectual atmosphere, and providing practice with clear and effective communication.	During the 20918-2019 academic year more effort was put into making new graduate students aware of the colloquium series (it was discussed during graduate orientation, and thesis supervisors encouraged their students to participate). As a result, we saw improved student attendance, and will continue these practices going forward.	Graduate supervisor/Thesis supervisors (ongoing).
G5. Carleton's graduate degree programs are some of the few programs to offer stand-alone degrees in cognitive science not dependent or housed within another department. Furthermore, several of the faculty members have attained international prominence for their cutting-edge research in cognitive science. Given Carleton's competitive advantage in cognitive science, we were surprised by the relatively low number of graduate applications for both the Master's and PhD degrees. The number of applications is lower than would expected for a program of Carleton's stature and the relative popularity of cognitive science as a field compared to the small number of universities offering degrees in cognitive science. Even if growth is not desired at this point, the uniqueness and value of this program should be promoted more widely with the goal of increasing the quality of students in the Institute. Again, the training students receive is extremely valuable and relevant given current trends in AI, Machine Learning, Big Data, and online interactions, and there is every reason to believe that good marketing could result in significantly more applications at the graduate level, and even at the undergraduate level. As the quality of the cohort increases so too does research output, external funding, and collaborations.	Note: This year we have 16 new students. Part of the increase is because of admitting more international students (1 funded; others self-funding). We are going to constitute a Public Relations Committee this fall, whose mandate will be to determine effective methods for promoting the unique strengths that our Institute has to offer.	New Public Relations committee (Fall 2019).

*Will any of the Action Items described above require calendar changes? If yes, please indicate which ones.

DATE: November 7, 2019

TO: Senate

FROM: Dr. Dwight Deugo, Vice-Provost and Associate Vice-President (Academic), and Chair, Senate Quality Assurance and Planning Committee

RE: Final Assessment Report and Executive Summary: Undergraduate and Graduate Programs in Neuroscience and Mental Health

The purpose of this memorandum is to request that Senate approve the Final Assessment Report and Executive Summary arising from the cyclical review of the undergraduate and graduate programs in Neuroscience and Mental Health.

The request to Senate is based on a recommendation from the Senate Quality Assurance and Planning Committee (SQAPC), which passed the following motion at its meeting of November 7th, 2019:

THAT SQAPC recommends to SENATE the approval of the Final Assessment Report and Executive Summary arising from the cyclical program review of the undergraduate and graduate programs in Neuroscience and Mental Health.

The Final Assessment Report and Executive Summary is provided pursuant to articles 4.2.5-4.2.6 of the provincial Quality Assurance Framework and article 7.2.23 of Carleton's Institutional Quality Assurance Process (IQAP). Article 7.2.23.3 of Carleton's IQAP (passed by Senate on June 26th, 2015 and ratified by the Ontario Universities Council on Quality Assurance on September 25th, 2015) stipulates that, in approving Final Assessment Reports and Executive Summaries 'the role of SAPC and Senate is to ensure that due process has been followed and that the conclusions and recommendations contained in the Final Assessment Report and Executive Summary are reasonable in terms of the documentation on which they are based.'

In making their recommendation to Senate and fulfilling their responsibilities under the IQAP, members of SQAPC were provided with all the appendices listed on page 2 of the Final Assessment Report and Executive Summary. These appendices constitute the basis for reviewing the process that was followed and assessing the appropriateness of the outcomes.

These appendices are not therefore included with the documentation for Senate. They can, however, be made available to Senators should they so wish.

Major modifications described in the Action Plan, contained within the Final Assessment Report, are subject to approval by the Senate Committee on Curriculum, Admission, and Studies Policy, the Senate Quality Assurance and Planning Committee (SQAPC) and Senate as outlined in articles 7.5.1 and 5.1 of Carleton's IQAP.

Once approved by Senate, the Final Assessment Report, Executive Summary and Action Plan will be forwarded to the Ontario Universities' Council on Quality Assurance and to Carleton's Board of

Governors for information. The Executive Summary and Action Plan will be posted
on the website of Carleton University's Office of the Vice-Provost and Associate Vice-President
(Academic), as required by the provincial Quality Assurance Framework and Carleton's IQAP.

Senate Motion November 29, 2019

THAT Senate approve the Final Assessment Report and Executive Summary arising from the Cyclical
Review of the undergraduate and graduate programs in Neuroscience and Mental Health.

CARLETON UNIVERSITY COMMITTEE ON
QUALITY ASSURANCE
Cyclical Review of the undergraduate and graduate programs in Neuroscience

Executive Summary and Final Assessment Report

This Executive Summary and Final Assessment Report of the cyclical review of Carleton's undergraduate and graduate programs in Neuroscience are provided pursuant to the provincial Quality Assurance Framework and Carleton's Institutional Quality Assurance Process (IQAP).

EXECUTIVE SUMMARY

The undergraduate and graduate programs in Neuroscience reside in the Department of Neuroscience, a unit administered by the Faculty of Science.

As a consequence of the review, the programs were categorised by the Senate Quality Assurance and Planning Committee (SQAPC) as being of good quality. (Carleton's IQAP 7.2.12).

The External Reviewers' report offered a very positive assessment of the programs. Within the context of this positive assessment, the report nonetheless made a number of recommendations for the continuing enhancement of the programs. These recommendations were productively addressed by the Director of the Department of Neuroscience, the Dean of the Faculty of Science and the Dean of the Faculty of Graduate and Postdoctoral Affairs in a response to the External Reviewers' report and Action Plan that was submitted to SQAPC on November 7th, 2019.

FINAL ASSESSMENT REPORT

Introduction

The undergraduate and graduate programs in Neuroscience reside in the Department of Neuroscience, a unit administered by the Faculty of Science. This review was conducted pursuant to the Quality Assurance Framework and Carleton's Institutional Quality Assurance Process (IQAP). As a consequence of the review, the programs were categorised by the Senate Quality Assurance and Planning Committee (SQAPC) as being of good quality. (Carleton's IQAP 7.2.12).

The site visit, which took place on March 21st and March 22nd, 2019 was conducted by Dr. Christopher Sturdy, University of Alberta and Dr. Linda Parker, University of Guelph. The site visit involved formal meetings with the Vice-Provost and Associate Vice-President (Academic), the Dean of the Faculty of Science, and the Dean of the Faculty of Graduate and Postdoctoral Affairs, and the Director of the Department of Neuroscience. The review committee also met with faculty members, staff, and undergraduate and graduate students.

The External Reviewers' report, submitted on March 29th, 2019 offered a very positive assessment of the program.

This Final Assessment Report provides a summary of:

- Strengths of the programs
- Challenges faced by the programs
- Opportunities for program improvement and enhancement
- The Outcome of the Review
- The Action Plan

This report draws on six documents:

- Volume I
- Discussant Recommendation Report
- External Reviewers' Report
- Brief Biographies of the External Examiners
- The response and action plan from the Director of the Department of Neuroscience, the Dean of the Faculty of Science and the Dean of the Faculty of Graduate and Postdoctoral Affairs.
- Communication from SQAPC regarding the outcome of the review.

The Action Plan identifies who is responsible for implementing the agreed upon recommendations, as well as the timelines for implementation and reporting.

Strengths of the programs

General

The External Reviewers' Report states that "Carleton is the first university in Canada to have a stand-alone Department of Neuroscience that offers undergraduate programs. The focus of the program is treatment of mental health disorders and is important to the general public. Carleton's location in the

National Capital Region provides opportunities for influence on politicians and policy makers, encouraging federal government to invest in future mental health initiatives, including First Nations communities. "

Faculty

Speaking with regard to faculty, the external reviewers' stated: *"*The curriculum vitaes of the faculty members definitively demonstrate the qualifications, research output, innovations, scholarly records, and the appropriateness of the faculty to meaningfully contribute to the programs."

Students

The external reviewers noted that "[a}t both undergraduate and graduate levels, and in many courses, students receive training in skills that are highly transferable to many different work environments. Importantly, there are dedicated courses in data analysis and statistics, in scientific writing, transferable skills, and knowledge mobilization."

Curriculum

The external reviewers noted that the "The programs' intellectual profile and learning outcomes clearly match the teaching and research strengths of the Department. The Department has wisely approached the development of the curriculum to be consistent with the current research strengths of the current faculty complement especially in the development of the programs in Neuroscience and Mental Health."

Opportunities for program improvement and enhancement

The External Reviewers' Report made 27 recommendations for improvement:

1. Central Administration must ensure the Health Sciences Building be totally completed and fully operational with NO further delays. We were repeated told, as have the faculty and students, that the animals will move into the building in June. The reviewers cannot emphasize strongly enough how important it is that the University meet this promised deadline.

2. Central Administration must ensure Faculty members are supported with timely, equitable, and sustained bridge research funding if required as a result of gaps in research funding exacerbated or caused by significant and ongoing construction delays. NSERC does NOT factor construction delays into funding decisions, they simply award or decline funding based on research productivity, HQP training, and the merit of the proposed research. Both the productivity and the HQP components of the funding formula are likely to be affected by the delays the faculty have endured. As well, graduate scholarship success is likely to be affected by the delays the students have endured. This also pertains to the importance of ensuring that "per diem" charges are kept to a minimal level to ensure that when the building is completed, the Faculty members can maintain a high level of productivity with their grant funds.

3. Central Administration must ensure graduate students are supported through the ongoing delays in construction; this includes: (1) sensible, fair, and easily accessed personal and research sample transportation to and from University of Ottawa, along with (2) straightforward, fair, transparent,

timely, and penalty free program extensions (3) Costs associated with travel to and from research sites in the most convenient manner for the students.

4. Central Administration must aid Faculty members to correct the "combined" program name issue to provide truth in advertising with respect to this program, and eliminate student enrollment confusion. A simple solution to is a change to Neuroscience and Biology, which would be unique in Canada. Without this name change, there is not only student confusion, but the program is not unique as interdisciplinary Neuroscience programs exist across several departments (and faculties) at most Canadian Universities.

5. Central Administration must develop a system to provide faculty members credit for instruction of independent studies students and honours students. Moreover, Central Administration must develop a system to provide faculty members financial support for such student supervision as this is costly in both time invested and research consumables used in the administration of arguably one of the most powerful forms of experiential learning available. The faculty self-study suggested that faculty receive $1500/honours student to pay for the research costs of the project -this seems reasonable to the reviewers

6. Central Administration and Communications need to provide consistent and active assistance in the distribution of materials designed to specifically promote the Department of Neuroscience, their undergraduate and graduate programs, and their excellence in research, teaching, and student engagement (e.g., SFN Chapter award), and cross-campus, national, and international collaborations and interdisciplinarity.

7. Central Administration needs to arrange transport for those who want this service for the return of research/laboratory equipment and materials from the University of Ottawa to Carleton.

8. Central Administration must hire a lab manager and/or project coordinator with the requisite skills required to get expensive, highly technical, and equipment critical to research and teaching laboratories, both responsible for significant experiential learning at the undergraduate and graduate levels, online, initially, and as an ongoing line item investment to secure smooth operation of these key resources.

9. Student/faculty ratios, class sizes, impressive retention rates, impressive record of student engagement, impressive growth of the Neuroscience undergraduate population, the addition of new undergraduate labs and extreme pressure on honours thesis projects indicate that the Department requires additional faculty. We recommend that the University recognize the workload and the cost to students who are unable to conduct an experiential learning research experience at the undergraduate level by providing at least two additional faculty members in areas deemed appropriate by the currently active Departmental Committee on Future Hiring headed by Dr Abizaid.

10. As identified in the Departmental self-study the co-op students benefit from work placements, but the majority of students do are unable to find placement. We encourage the co-op office to expand their range of expertise to the life sciences to increase opportunities for students in these fields.

11. The Neuroscience students in the NMH program are excluded from the second year laboratory course BIOL 2200 (Cellular Biology) and as such have no laboratory courses in their second year. We

would encourage the Dean of Science to follow the recommendation of the self-study, that additional resources be given to the Department of Biology to run additional sections of the course that is critically important to Neuroscience students.

12. Neuroscience Faculty Members should emphasize and promote their already existing multidisciplinary research clusters and collaborations.

13. Neuroscience Faculty Members should be explicit about the graduate student committee composition (internal/external, external/external) for various stages (comprehensive exam, masters and doctoral defenses) in their graduate handbook.

14. Neuroscience Faculty Members should tighten up the Graduate Student Review process to track students having difficulty meeting expectations with action plans provided to remediate problems.

15. Neuroscience Faculty members should clarify the preferred method of conducting the comprehensive exam, with clear timelines and expectations for success in the preferred method.

16. Neuroscience Faculty Members should provide clarification and transparency surrounding graduate support sources and minimums. This should include creating a Department specific RA (with funding from the Dean of Science) to be included in the graduate student funding.

17. Neuroscience Faculty Members should list possible courses from other units to show interdisciplinarity (as described in the organizational chart; quadrants: 1. psychosocial, 2. behavioural, 3. translational, 4, cellular/molecular).

18. Recently not all students have received co-op placements. Opportunity: Increase the range of opportunities for majors and general students as well.

19. We recommend that the Department specifically list in the Undergraduate Calendar a set of suggested electives from other departments that will provide a broader coverage of neuroscience courses outside of the domain of the expertise of the current faculty members, such as cognitive neuroscience and computer science. This would provide a broader approach and demonstrate interdisciplinarity.

20. The reviewers see an opportunity that exists to add practical options such as graduate students completing research project rotations in other labs for course credit. Such courses are common practice in other universities.

21. The reviewers see an opportunity to list other relevant courses from other programs that students may consider enrolling in to provide breadth and/or relevant experience required to complete their graduate training.

22. The reviewers are concerned that one weakness is significant enrollment pressure that will impede gaining research-based experience for all students who want such opportunities. We see an opportunity for growth to address this need, possibly by expanding to include research project course options in third year to promote and allow for more research experience.

23. Possible weakness is that the requirements are too essential, and as a result, a key neuroscience area cognitive neuroscience, is omitted. This weakness can be turned into an opportunity by listing related courses from other departments that students may consider completing.

24. The program has an appropriate governance and administrative structure but a glaring weakness is that in the past has relied heavily upon one valiant faculty member, with negative results for this faculty member. An opportunity exists, and seems to be in progress now, by having a new chair, and could further be enhanced by allowing the current and future Chairs receive 100 percent release from teaching responsibilities.

25. We heard that there are many different funding levels from senior administration and faculty in the Department of Neuroscience. The minimum guarantee varied from $18,500 (Department understanding) and $24,000 (from Dean of Graduate Studies and PDFs). We recommend that the faculty provide clarification and transparency regarding the minimum guaranteed funding and that a Departmental RA fund be created with funding from the Dean to be included in the minimum guarantee to ensure adequate funding in the current competitive climate for attracting high quality students.

26. One weakness the reviewers observed was the lack of external examiners in the comprehensive committee membership. Because of this, an opportunity for increasing the breadth of training for graduate students would be the inclusion of external examination members on the comprehensive exam committee, as described in our recommendation, below. We have also suggested tightening up both the graduate student progress reporting and clarifying the preferred method of conducting the qualifying examination.

27. Our recommendations also suggest tightening up and clarifying the preferred method for the comprehensive exam and student progress reports.

The Outcome of the Review

As a consequence of the review, the undergraduate and graduate programs in Neuroscience were categorised by the Senate Quality Assurance and Planning Committee (SQAPC) as being of **GOOD QUALITY** (Carleton's IQAP 7.2.12).

The Action Plan

The recommendations that were put forward as a result of the review process were productively addressed by the Director of the Department of Neuroscience, the Dean of the Faculty of Science, and the Dean of the Faculty of Graduate and Postdoctoral Studies in a response to the External Reviewers' report and Action Plan that was considered by SQAPC on October 17th, 2019. The Department agreed unconditionally to recommendations # 4, 6, 12, 13, 14, 14, 17, 20, 21, and agreed to recommendations #1-3, 5,7-11. 16, 23 and 25 if resources permit. They noted that recommendations 18, 19, 24, 26-28 had either been addressed in the Volume 1 or fell outside the department's control.

It is to be noted that Carleton's IQAP provides for the monitoring of action plans. A midway report is to be submitted by the academic unit(s) and Faculty Dean(s), and forwarded to SQAPC for its review by June 30th, 2021.

The Next Cyclical Review

The next cyclical review of the undergraduate and graduate programs in Neuroscience will be conducted during the 2025-26 academic year.

UNIT RESPONSE AND IMPLEMENTATION PLAN **Programs Being Reviewed:**				
External Reviewer Recommendation & Categorization	**Action Item**	**Owner**	**Timeline**	**Will the action described require calendar changes? (Y or N)**
1. *Central Administration must ensure the Health Sciences Building be totally completed and fully operational with NO further delays. We were repeated told, as have the faculty and students, that the animals will move into the building in June. The reviewers cannot emphasize strongly enough how important it is that the University meet this promised deadline.*	*The timeline for the completion of the facility and the return of the animals is contingent upon construction schedules that are beyond the control of the university. The current plan is for the animals to return by the end of August.*	*University*	*Aug. 2019*	*N*
2. *Central Administration must ensure Faculty members are supported with timely, equitable, and sustained bridge research funding if required as a result of gaps in research funding*	*Extensive bridge funding has been provided and will continue to be provided. This includes having contracted vivarium space at the University of Ottawa and other facilities to allow for the researchers and students to undertake research during the construction of the new facility. Upon return, per diem charges will be reasonable and*	*University*	*Aug. 2019*	*N*

exacerbated or caused by significant and ongoing construction delays. NSERC does NOT factor construction delays into funding decisions, they simply award or decline funding based on research productivity, HQP training, and the merit of the proposed research. Both the productivity and the HQP components of the funding formula are likely to be affected by the delays the faculty have endured. As well, graduate scholarship success is likely to be affected by the delays the students have endured. This also pertains to the importance of ensuring that "per diem" charges are kept to a minimal level to ensure that when the building is completed, the Faculty members can maintain a high level of productivity with their grant funds.	*heavily subsidized in order to assist the researchers in the department.*			

3.	*Central Administration must ensure graduate students are supported through the ongoing delays in construction; this includes: (1) sensible, fair, and easily accessed personal and research sample transportation to and from University of Ottawa, along with (2) straightforward, fair, transparent, timely, and penalty free program extensions (3) Costs associated with travel to and from research sites in the most convenient manner for the students.*	*The University and the Faculty of Science have supported and continue to support graduate students in each of the categories outlined by the external reviewers.*	*University and Faculty of Science*	*Aug. 2019*	*N*
4.	*Central Administration must aid Faculty members to correct the "combined" program name issue to provide truth in advertising with respect to this program, and eliminate student enrollment confusion. A simple solution is to change to Neuroscience and Biology, which would be unique in Canada. Without this name change, there is not only student confusion, but the program is not unique as interdisciplinary Neuroscience programs*	*The dean has met with the chairs of the departments of Biology and Neuroscience and are working on a solution that is transparent to students and amenable to both departments.*	*University*	*Sept. 2019*	*Y*

exist across several departments (and faculties) at most Canadian Universities.				
5. *Central Administration must develop a system to provide faculty members credit for instruction of independent studies students and honours students. Moreover, Central Administration must develop a system to provide faculty members financial support for such student supervision as this is costly in both time invested and research consumables used in the administration of arguably one of the most powerful forms of experiential learning available. The faculty self-study suggested that faculty receive $1500/honours student to pay for the research costs of the project -this seems reasonable to the reviewers*	*The Faculty of Science is working on a system to account for the workload associated with research student supervision. The suggestion regarding financial support – although laudable in theory – is not consistent with practice in any of the other experimental science departments within the Faculty, the University, or at comparable Universities. There are insufficient resources available for such a program.*	*University and Faculty of Science*	*Sept. 2020*	*N*

6. Central Administration and Communications need to provide consistent and active assistance in the distribution of materials designed to specifically promote the Department of Neuroscience, their undergraduate and graduate programs, and their excellence in research, teaching, and student engagement (e.g., SFN Chapter award), and cross-campus, national, and international collaborations and interdisciplinarity.	*The Faculty of Science and the University use many different resources to promote the Department of Neuroscience, the research and teaching excellence it exhibits, and the individuals (faculty, staff, and students) that are associated with it.*	*University and Faculty of Science*	*Sept. 2019*	*N*
7. Central Administration needs to arrange transport for those who want this service for the return of research/laboratory equipment and materials from the University of Ottawa to Carleton.	*The University and the Faculty of Science have supported and continue to support individuals (faculty, staff, students) for travel to the University of Ottawa for the duration of the disruption.*	*University and Faculty of Science*	*Aug. 2019*	*N*
8. Central Administration must hire a lab manager and/or project coordinator with the requisite skills required to get expensive, highly technical, and equipment critical to research and teaching laboratories, both responsible for	*The Faculty of Science has already hired a lab coordinator responsible for such tasks regarding the teaching labs for the Department. Additional requests for resources will be considered as part of our typical budget cycle.*	*Faculty of Science*	*Mar. 2020*	*N*

significant experiential learning at the undergraduate and graduate levels, online, initially, and as an ongoing line item investment to secure smooth operation of these key resources.				
9. *Student/faculty ratios, class sizes, impressive retention rates, impressive record of student engagement, impressive growth of the Neuroscience undergraduate population, the addition of new undergraduate labs and extreme pressure on honours thesis projects indicate that the Department requires additional faculty. We recommend that the University recognize the workload and the cost to students who are unable to conduct an experiential learning research experience at the undergraduate level by providing at least two additional faculty members in areas deemed appropriate by the currently active Departmental*	*The Faculty of Science intends to provide an additional faculty member hire for the Department. Additional requests for resources will be considered as part of our typical budget cycle.*	*Faculty of Science*	*Mar. 2020*	*N*

Committee on Future Hiring headed by Dr Abizaid.				
10. *As identified in the Departmental self-study the co-op students benefit from work placements, but the majority of students do are unable to find placement. We encourage the co-op office to expand their range of expertise to the life sciences to increase opportunities for students in these fields.*	*The Faculty of Science is prepared to work with the Department and the Co-op office to expand suitable opportunities for our students to engage in work placements, etc.*	*Faculty of Science*	*Sep. 2019*	*N*
11. *The Neuroscience students in the NMH program are excluded from the second year laboratory course BIOL 2200 (Cellular Biology) and as such have no laboratory courses in their second year. We would encourage the Dean of Science to follow the recommendation of the self-study, that additional resources be given to the Department of Biology to run additional sections of the course that is critically*	*The Faculty of Science will work with the Departments of Neuroscience and Biology to expand their capacity and lab offerings for students. Additional requests for resources will be considered as part of our typical budget cycle.*	*Faculty of Science*	*Mar. 2020*	*Y*

important to Neuroscience students.				
12. Neuroscience Faculty Members should emphasize and promote their already existing multidisciplinary research clusters and collaborations.	As noted by reviewers, the department does have many existing research clusters and collaborations. Indeed, we have expertise across a wide range of neuroscience and mental health topics and are capitalizing on our existing strengths by establishing formal research clusters (some examples of our research clusters are stress and mental health, Parkinson's disease, dysregulated excitability, social neuroscience, and metabolic regulators of mental health). An increased online presence and resources in these areas are currently being developed. In terms of collaborations within Carleton, we collaborate extensively with colleagues in other units (biology, chemistry, psychology, public policy, health sciences, etc). We have a research centre (CHAIM) that is consciously and conscientiously interdisciplinary, facilitating joint discussions, events, and student experiences. We also enjoy strong collaborations both within the city (University of Ottawa, OHRI, Royal Ottawa Hospital) and beyond. We will increase the visibility of these collaborations/clusters through changes to our departmental website.	Departmental administrators will work to make these clusters more visible on our departmental website	By September 2019	N
13. Neuroscience Faculty Members should be explicit about the graduate student committee composition (internal/external, external/external) for various stages	Graduate student committee compositions will be made more explicit, especially with regards to specific external and internal members. This information will be updated in the online Graduate Student Handbook, so will be readily accessible to all students. Specifically, the M.Sc. and Ph.D. thesis prospectus committee comprises the supervisor plus two additional core neuroscience faculty; this	Our graduate handbook will be updated by our graduate administrator to reflect the increased clarity of the graduate	September 2019	N

		student committee compositions.		
(comprehensive exam, masters and doctoral defenses) in their graduate handbook.	is also referred to as the Thesis Advisory Committee (TAC). The M.Sc. final thesis defense committee includes an additional 'internal examiner' which is an additional faculty member from outside of neuroscience (but typically within Carleton). The 'internal examiner' can be a Carleton faculty member with no formal ties to the department, or a Carleton faculty member with a 0% cross-appointment to the Department of Neuroscience or can be an adjunct professor appointed to the Department of Neuroscience. The Ph.D. prospectus committee includes the TAC, internal examiner, plus an additional 'external member' that comes from outside of Carleton and has no formal ties to the Department of Neuroscience. The Ph.D. comprehensive committee will be made up of the supervisor plus two additional neuroscience faculty members (which may or may not differ from the TAC). The Ph.D. comprehensive committee may also include examiners that are external to the core Neuroscience faculty (equivalent to the 'internal examiner' described above) to enhance the range of expertise on the examining committee, should the committee judge this to be in the best interests of the Ph.D. candidate.			
14. Neuroscience Faculty Members should tighten up the Graduate Student Review process to track students having difficulty meeting expectations with action plans provided to remediate problems.	To tighten up student tracking, brief TAC meetings will occur once per year for all graduate students and during this meeting, students will present their progress thus far, and their plan for the next year. At the end of each meeting, the TAC will complete and sign a form that outlines any additional actions that need to be taken. We will be more diligent in making sure students meet milestone dates. The graduate administrator will be responsible for ensuring that the progress for each student is tracked appropriately and will inform both the supervisor and the TAC of any students who have	The graduate administrator and Graduate Chair will together work to ensure students will be meeting the timelines and expectations	Ongoing	N

	not completed their annual review. The Graduate Chair will also actively encourage all PIs to meet regularly with students to better gauge their progress through the program.			
15. Neuroscience Faculty members should clarify the preferred method of conducting the comprehensive exam, with clear timelines and expectations for success in the preferred method.	The CPR committee agrees with the recommendation. However, rather than making a definitive decision on which version of the comprehensive exam is the preferred option, we have struck an ad hoc committee to explore fully what format of the comprehensive exam would be the most rigorous and meet the learning objectives and benchmarking purpose of the comprehensive exam.	Prof Hildebrand has agreed to Chair this committee for the duration of the 2019-2020 academic term. A recommendation will be made to the Department by Jan 2020, with a final decision by Apr 2020. Calendar changes (if necessary) will take a full year for approval.	September 2021	Potentially
16. Neuroscience Faculty Members should provide clarification and transparency surrounding graduate support sources and minimums. This should include creating a Department specific RA (with funding from the Dean of Science) to be included in the graduate student funding.	Student funding from the Scholarship and TA portion of the official offer will be guaranteed but unfortunately, the RA portion cannot be as strictly guaranteed. Hence, this portion is dependent upon the specific PI.	All faculty	Ongoing	no

17. *Neuroscience Faculty Members should list possible courses from other units to show interdisciplinarity (as described in the organizational chart; quadrants: 1. psychosocial, 2. behavioural, 3. translational, 4, cellular/molecular).*	We have developed a list of courses that students could choose from that would likely increase the breadth of their degree, that are outside the faculty of science. We will include these courses as recommended options on our departmental website (Carleton.ca/neuroscience/current undergraduates/FAQ)	The undergraduate administrator and Undergraduate Chair	Completed	no
18. *Recently not all students have received co-op placements. Increase the range of opportunities for majors and general students as well (p.6)*	See 10			
19. *We recommend that the Department specifically list in the Undergraduate Calendar a set of suggested electives from other departments that will provide a broader coverage of neuroscience courses outside of the domain of the expertise of the current faculty members, such as cognitive neuroscience and computer science. This would provide a broader approach and demonstrate interdisciplinarity. (p.7)*	See 17			

20. *Reviewers see an opportunity that exists to add practical options such as graduate students completing research project rotations in other labs for course credit. Such courses are common practice in other universities. (p.8)*	We currently have a graduate course (NEUR 6301; 6302, Techniques in Neuroscience I and II), which is available to any graduate student. Students are required to learn a new technique not previously acquired for their thesis. These are often undertaken outside of the PI's lab or even outside the departmental labs.	n/a	n/a	no
21. *The reviewers see an opportunity to list other relevant courses from other programs that students may consider enrolling in to provide breadth and/or relevant experience required to complete their graduate training. (p.8)*	We are exploring listing certain psychology courses as possible courses that could be taken as part of their graduate training. Carleton also has an agreement with the UOttawa so that our graduate students can take any of their courses. We will highlight this in our graduate handbook.	Graduate administrator	Sept 2019	no
22. *The reviewers see an opportunity to list other relevant courses from other programs that students may consider enrolling in to provide breadth and/or relevant experience required to complete their graduate training. (p.8)*	See 21.			
23. *The reviewers are concerned that one weakness is significant enrollment pressure that will impede gaining research-based experience for all students who want such*	See 9. The reviewers recommend addressing this comment by the provision of additional faculty resources. We currently offer a 4th year Independent study (NEUR 4900) that students can take in 3rd year. Further, we will be offering 3rd year course-linked labs which will offer increased opportunities for lab-based experiential learning. Finally, additional faculty hires will also increase	See 9	See 9	

opportunities. We see the flip side of this weakness as an opportunity for growth to address this need, possibly by expanding to include research project course options in third year to promote and allow for more research experience. (p.8)	the number of placements for undergraduate volunteer or course-based research experience.			
24. Possible weakness is that the requirements are too essential, and as a result, a key neuroscience area, cognitive neuroscience, is omitted. This weakness can be turned into an opportunity by listing related courses from other departments that students may consider completing. (p.9)	See 17			
25. The program has an appropriate governance and administrative structure but a glaring weakness is that in the past has relied heavily upon one valiant faculty member, with negative results for this faculty member. An opportunity exists, and seems to be in progress now, by having a new chair, and could further be enhanced by allowing the current and future Chairs receive 100	To be addressed by the Dean.			

percent release from teaching responsibilities. (p.9)				
26. We heard many different funding levels from senior administration and faculty in the Department of Neuroscience. The minimum guarantee varied from $18,500 (Department understanding) - $24,000 (from Dean of Graduate Studies and PDFs). Recommendation #14 addresses this concern. We recommend that the faculty provide clarification and transparency regarding the minimum guaranteed funding and that a Departmental RA fund be created with funding from the Dean to be included in the minimum guarantee to ensure adequate funding in the current competitive climate for attracting high quality students.	See 16			

27. One weakness the reviewers observed was the lack of external examiners in the comprehensive committee membership. Because of this, an opportunity for increasing the breadth of training for graduate students would be the inclusion of external examination members on the comprehensive exam committee. (p. 13)	See 15				
28. Tighten up and clarify the preferred method for the comprehensive exam and student progress reports. (p.14)	See 15				