

McMaster
University



**SELF-STUDY
GUIDEBOOK**

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INTRODUCTION

This guidebook was written by the IQAP Office at McMaster University to assist departments in completing the cyclical review Self-Study document. The purpose of this guidebook is to outline the objectives and requirements of the review process, to explain in greater detail what types of evidence is required and to identify any available resources to facilitate with the successful completion of each section.

In addition to this handbook, the IQAP Office supports departments throughout the review process in various ways, including: consultations regarding learning outcomes and curriculum mapping, student focus groups and survey administration, faculty retreats and advice on the completion of the Self-Study as well as providing feedback on draft reports prior to their official submission.

The IQAP is subject to approval by the Quality Council when it is initiated and thereafter, when it is revised. The Quality Council will audit the University on an 8-year cycle under the terms outlined in the Quality Assurance Framework.

OBJECTIVES OF CYCLICAL REVIEW PROCESS

The objectives of the cyclical review process at McMaster are:

- To facilitate the development and continued improvement of our undergraduate and graduate academic programs.
- To promote curriculum development and improvement in an ongoing, iterative process.
- To ensure that McMaster continues to lead internationally in its reputation for innovation in teaching and learning and for the quality of its programs.
- To incorporate input from all principal stakeholders.
- To help shape programs to have characteristics that are most valued at McMaster while also meeting the responsibility for quality assurance.

QUALITIES OF EFFECTIVE SELF-STUDIES

FEATURE	BEST PRACTICES	POOR PRACTICES
GOAL / PURPOSE	The self-study is aimed at quality improvement. Self-appraisal asks for analysis of strengths and weaknesses, and asks how improvements can be made.	The Self-Study is aimed at defending or justifying the status quo.
FOCUS	The Self-Study focuses on the undergraduate /graduate programs (as required by the IQAP and Quality Assurance Framework).	The Self-Study focuses on the academic unit (department), rather than on the undergraduate/graduate program.
CHARACTER / NATURE OF REPORT	The self-study is reflective, analytical, self-critical and evaluative.	The Self-Study is descriptive rather than reflective, analytical, self-critical and evaluative.
TREATMENT OF CURRICULUM	The curriculum is critically examined, with an eye to degree level expectations, learning objectives, learning outcomes, and change and improvement.	The curriculum is described.
DEGREE LEVEL EXPECTATIONS / LEARNING OUTCOMES	The Self-Study expresses degree level expectations and program learning outcomes that operationally drive admission requirements, curriculum content, modes of delivery, bases of evaluation of student performance and commitment of resources.	The Self-Study does not address or only superficially addresses degree level expectations and learning outcomes.
TREATMENT OF DATA	Data are analyzed – for example, to use as the basis for performance evaluation. Data analysis contributes to the assessment of strengths and weaknesses of the program.	Raw data are attached as appendices, or used only in a descriptive manner.
AUTHORSHIP	The Self-Study results from a participatory self-critical process and documents involvement in its preparation of all faculty in the program, and of students.	The Self-Study is written by the Chair, without evidence of buy-in (or sometimes even knowledge) of faculty and students.
STUDENT INVOLVEMENT	The Self-Study shows active involvement of students in the agenda setting, self-analysis and preparation of the Report.	There is no evidence of active involvement of students in the preparation of the Self-Study.

STUDENT ROLE	Students contribute to the preparation of the Self-Study <i>and</i> meet with the external reviewer(s).	Students meet with the external reviewer(s), but have no input to the self-appraisal.
STUDENT SURVEY	A student survey provides another valuable source of input to the self-study.	A student survey is either missing or conducted after the Self-Study is prepared, and so makes no input to that document.
RELATIONSHIP TO EXTERNAL REVIEWER MANDATE	The Self-Study does address, and inform, all of the issues external reviewers are asked to review.	The Self-Study does not address, or inform, all of the issues external reviewers are asked to review.
IQAP / QUALITY ASSURANCE FRAMEWORK	The Self-Study does explicitly address each of the “elements” specified in the IQAP and Quality Assurance Framework.	The Self-Study does not explicitly address each of the “elements” specified in the IQAP and Quality Assurance Framework.
INSTITUTIONAL CRITERIA	The institution does specify the criteria of program quality used in its program review process.	The institution does not specify the criteria of program quality used in its program review process.

This chart is adapted from the Quality Council’s Guide to the Quality Assurance Framework. It highlights best practices in completing Self-Study reports.

INVOLVEMENT OF STUDENTS AND STAKEHOLDERS IN THE CYCLICAL REVIEW PROCESS:

Employing meaningful ways to involve students in the development of the cyclical review Self-Study report is an important part of preparation for the cyclical review. Programs may seek student perspectives by including students in focus groups and/or as part of the team responsible for leading the preparation of the Self-Study report. Input from alumni is frequently obtained by conducting surveys of past graduates. Another way to approach this is to ensure that there is ongoing involvement of students in the academic unit's governance structures and processes. When students are providing *regular* input on their courses and program requirements, it is very easy to gather and incorporate that information into a Self-Study that results in meaningful analysis and reflection. Constant contact with students, through their representation on departmental committees (i.e. curriculum review committee, academic councils) and through their involvement in departmental seminars or workshops, can facilitate their engagement in the quality assurance process.

COMPLETING THE SELF-STUDY DOCUMENT

The Chair, in collaboration with relevant groups and/or individuals, is responsible for preparing a Self-Study document that is ***broad-based, reflective, forward-looking and inclusive*** for critical analysis. It should identify any pertinent information that it deems appropriate for inclusion. The Self-Study must address and document the consistency of the program learning outcomes with the University's mission and academic plans as well as the Degree Level Expectations, and most importantly how graduates of the program achieve those outcomes. ***The Self-Study should include the criteria and quality indicators listed below.***

1. PROGRAM

Programs may want to preface this section by providing reviewers with a brief history and evolution of the program(s) under review, its relevant milestones and its purpose within the institution. Please include links to any relevant web pages.

1.1 Consistency of the Program with the University's Mission and Academic Plan.

Departments are asked to include a description of how the program aligns with McMaster's mission and academic plan. McMaster's Current Priorities and Strategic Mandate Agreement should be at the forefront of program design. This information can be found by ***copying and pasting*** the links below into your web browser:

McMaster's Strategic Mandate Agreement:

http://www.mcmaster.ca/vpacademic/documents/SMA_2014_McMaster_Agreement.pdf

McMaster's current priorities:

http://www.mcmaster.ca/presidentsoffice/documents/Letter_Forward_with_Integrity_21Sep11.pdf

Please elaborate on how your program ***aligns with each of the four priorities*** outlined in the Forward with Integrity letter:

- a) The Student Experience
- b) Community Engagement
- c) Research
- d) Internationalization

1.2 Program Requirements

Departments may provide a URL or attach the relevant Undergraduate Calendar/Graduate Calendar pages, program booklets and/or other relevant documents.

1.3 Alignment of Degree Level Expectations with Program Learning Outcomes

a) This section should indicate the knowledge, skills and values that graduates of the program will possess. The program learning outcomes should be met through the design of the program curriculum and its selected assessments. Ideally, program level outcomes should be in place prior to the cyclical review. However, if departments require additional assistance in the development/revision of their program learning outcomes, please contact: igap@mcmaster.ca. Additional resources to help with the creation of program learning outcomes can be found in the links provided below:

- **Ontario Universities Council of Quality Assurance:**
<http://oucqa.ca/guide/resources-on-curriculum-development-assessment-learning-outcomes-quality-indicators/>
- **University of Ottawa Program Learning Outcomes Link Directory:**
<http://www.grad.uottawa.ca/Portals/29/LaFESP/Ensuring-the-value-of-university-degrees-in-ontari.pdf>
- **The University of Sydney Graduate Attribute Statements:**
<http://www.itl.usyd.edu.au/projects/nationalgap/resources/gamap/map.cfm?ga=1>
- **Brigham Young University Expected Learning Outcomes:**
<https://learningoutcomes.byu.edu/>
 - **Capella University Program Learning Outcomes:**
<http://www.capella.edu> Click on the link for an example of Degree Outcomes for Bachelor of Science in Nursing from Capella University or please feel free to browse the website for other program-specific degree outcomes: <http://www.capella.edu/online-degrees/bachelors-rn-to-bsn-completion/degrees-outcomes/>
 - Choose **Degrees & Programs** from the drop down menu → Select your program of choice (e.g. Business – Bachelor’s) → Select a **Specialization** from the menu on the left side of your screen (e.g. Accounting - BS) → Scroll down the page to **Degree Outcomes** → Click on the **what you’ll learn** link → Scroll down until you see the heading **Your Degree Outcomes**

- **Program Review and Enhancement Guidebook PDF** by Lynn Martin & Lori Goff is available here: <https://miietl.mcmaster.ca/site/wp-content/uploads/2015/01/Program-Review-and-Enhancement-Guidebook.pdf> or under the Resources section at <https://miietl.mcmaster.ca/site/iqap/>
- b) Once program learning outcomes have been outlined, departments should discuss the clarity and appropriateness of the program's requirements and associated learning outcomes in meeting the Degree Level Expectations (UDLEs for undergraduate; GDLEs for graduate, respectively). Please be sure to address how the program meets/exceeds each of the DLEs listed below. Note: Appendix A and Appendix B describe the Degree Level Expectations in greater detail.

UNDERGRADUATE DLES	GRADUATE DLES
Depth and Breadth of Knowledge Knowledge of Methodologies Application of Knowledge Communication Skills Awareness of Limits of Knowledge Autonomy and Professional Capacity	Depth and Breadth of Knowledge Research and Scholarship Application of Knowledge Communication Skills Awareness of Limits of Knowledge Autonomy and Professional Capacity

A table can be used to assist in demonstrating this alignment; alternatively, departments may choose to include a narrative to describe this alignment.

2. ADMISSION REQUIREMENTS

2.1 Program Admission Requirements

This section of the proposal asks the department to outline the program admission requirements and discuss how they are determined such that students may be reasonably expected to achieve the learning outcomes upon program completion.

Undergraduate Programs can consult the academic calendar found here <http://academiccalendars.romcmaster.ca/index.php> to determine admission requirements.

Graduate Programs can consult the academic calendars found here <http://academiccalendars.romcmaster.ca/index.php?catoid=4> to determine admission requirements.

2.2 Aligning Admission Requirements with Degree Level Expectations

Explain how the admission requirements are appropriately set to allow students to progress through the program and meet or exceed the Degree Level Expectations (see Appendix A and B for UDLES and GDLES, respectively).

3. CURRICULUM

3.1 Current State of Discipline

- Explain how the program curriculum reflects the current state of the discipline, area of study or field.
- Comments on how the curriculum is kept current should also be included.
- Particular reference should be made to how your curriculum reflects a diverse student population and presents a variety of local and global perspectives.

3.2 URL for Program Calendar

In this section, departments can simply include a URL that links to the course offerings and their description. However, additional written materials describing course offerings, degree programs, etc. may also be included.

3.3 Program Innovation

This section provides departments with the opportunity to highlight their innovative or unique approaches to teaching and learning.

- Departments may comment on but are not limited to some of the following initiatives: *blended learning, technology-enhanced courses, use of learning portfolios, professional development opportunities, co-operative education or community service learning components, etc.*
- Discuss whether or not these components of the program are unique to students in the proposed program or at McMaster University.
- Please discuss how your program ensures the accommodation of students with disabilities (please consider multiple types of disabilities).

3.4 Accessibility

Describe how teaching in your program prioritizes areas of accessibility and removes barriers to student learning. Some questions you may want to consider include:

- In what ways is your program proactive, accessible and inclusive in teaching and designing courses and curricula?
- How does your program take into account a variety of student identities, including race, ethnicity, disabilities, language, age and gender?
- How does the program remove barriers to learning and reduce the need for specialized accommodations?

Additional information can be found on the McMaster Accessibility website:

<http://accessibility.mcmaster.ca/>.

3.5 Modes of Delivery

This section asks for a description of what the mode(s) of delivery for the proposed program will be (e.g. classroom, tutorial, lab, online, blended, community service learning, etc).

- Please be sure, however, to explain how these mode(s) of delivery are appropriate and effective in helping students achieve the proposed learning outcomes as well as improve the overall student learning experience.
- Describe how courses in the program design and deliver content in accessible formats. Some examples of accessible formats include (but are not limited to): selecting resources (i.e. textbooks) that are already available in alternative formats; using closed captioning for audio-visual components; including an accessibility and accommodation statement in course syllabi, etc.
- Additional information can be found on the McMaster Accessibility website: <http://accessibility.mcmaster.ca/>.

Those who wish to consider online or blended learning for courses or other elements of the program can visit <http://miietl.mcmaster.ca/site/educational-technology/>.

4. TEACHING AND ASSESSMENT

4.1 Methods of Assessment

In this section, please outline the types of assessments that are used to evaluate student progress in the program and explain why they have been selected. Departments are asked to provide a broad stroke representation of assessment practices. For example, consider the following:

- Appropriateness and effectiveness of means of assessment, especially in students' final year of the program, in clearly demonstrating achievement of the program learning outcomes
- What skills are your assessments evaluating? Do these assessments align with your program learning outcomes?
- How are assessments **designed** to take into account a variety of student accessibility needs? How do assessments reduce (or eliminate) barriers to student learning?

4.2 Curriculum Map

Departments are asked to demonstrate that the program aligns with the Degree Level Expectations. Staff at MIIETL are available to assist with the preparation of

the curriculum map to show how individual course level learning objectives align with program learning outcomes. Departments may choose to complete the Undergraduate or Graduate Curriculum Map template provided in Appendix C or Appendix D, respectively. A fillable version of these templates can be found under the *Resources* section on the IQAP website: <http://miietl.mcmaster.ca/site/igap/>.

5. RESOURCES TO MEET PROGRAM REQUIREMENTS

Note: Please be sure to complete the appropriate section based on whether you are undergoing an Undergraduate or a Graduate IQAP Cyclical Program Review. The information requested may differ between undergraduate and graduate programs.

5.1 UNDERGRADUATE PROGRAMS

5.1.1 Use of Existing Human, Physical and Financial Resources

Discuss the appropriateness and effectiveness of the department's use of existing resources (e.g. human, physical, financial) in delivering and maintaining the quality of its program, in relation to the University's priorities for and constraints on funding, space, and faculty allocation.

5.1.2 List of Faculty Members Involved in Delivery of Program

Please list faculty members involved in the delivery of the program.

Note: Programs should be prepared to provide copies of faculty CVs to the review team. CVs can be provided on CD/USB and do not have to be printed unless the reviewers request programs to do so. There is no specific CV format required.

Provided below are two sample tables that departments can choose to use. Please note that although Graduate Programs *must* use **Template 2**, Undergraduate Programs can choose to present this information in an alternative format.

Template 1:

Name of Faculty Member	Class of Appointment

Template 2:

Faculty Members by Field							
Faculty Name & Category of Appointment	M/F	Home Unit ¹	Supervisory Privileges ²	Fields if applicable			
				1 ³	2	3	4
Category ⁴							
Aaaa - Assistant			Master's	x		x	
Bbbb - Professor			Full	x	x		
Cccc - Associate			Full				x
Dddd - Professor			Master's		x	x	
Category 2							
Eeee - Associate			Master's				
Category 3							
Ffff - Assistant			Master's				
Category 4							
Gggg- Professor (X)			Full				
Etc.							

1. *This is the budget unit paying the salary: department, school, research centre or institute, or other.*
2. *Indicate the level of supervisory privileges held by each faculty member: e.g., full, master's only, co-supervision only, etc.,*
3. *Either give the field name or a footnote reference to it.*
4. *List faculty members under the categories suggested, as applicable*

Category 1: tenured or tenure-track core faculty members whose graduate involvement is exclusively in the graduate program under review. For this purpose the master's and doctoral streams of a program are considered as a single program. Membership in the graduate program, not the home unit, is the defining issue.

Category 2: non-tenure-track core faculty members whose graduate involvement is exclusively in the graduate program under review.

Category 3: tenured or tenure-track core faculty members who are involved in teaching and/or supervision in other graduate program(s) in addition to being a core member of the graduate program under review.

Category 4: non-tenure track core faculty members who are involved in teaching and/or supervision in other graduate program(s) in addition to being a core member of the graduate program under review.

Category 5: other core faculty: this category may include emeritus professors with supervisory privileges and persons appointed from government laboratories or

industry as adjunct professors. Please explain who would fall into this category at your institution.

Category 6: non-core faculty who participate in the teaching of graduate courses.

5.1.3 Physical Facilities and Space

Departments are being asked to outline what physical facilities and spaces are used in the delivery of the program.

5.2 GRADUATE PROGRAMS

5.2.1 Use of Existing Human, Physical and Financial Resources

Discuss the appropriateness and effectiveness of the department's use of existing resources (e.g. human, physical, financial) in delivering and maintaining the quality of its program, in relation to the University's priorities for and constraints on funding, space, and faculty allocation

5.2.2 List of Faculty Members Involved in Delivery of Program

Please list faculty members involved in the delivery of the program. Graduate Programs should use the template provided below,

Note: Programs should be prepared to provide copies of faculty CVs to the review team. CVs can be provided on CD/USB and do not have to be printed unless the reviewers request programs to do so. There is no specific CV format required.

Faculty Members by Field							
Faculty Name & Category of Appointment	M/F	Home Unit ¹	Supervisory Privileges ²	Fields if applicable			
				1 ³	2	3	4
Category ⁴							
Aaaa - Assistant			Master's	x		x	
Bbbb - Professor			Full	x	x		
Cccc - Associate			Full				x
Dddd - Professor			Master's		x	x	
Category 2							
Eeee - Associate			Master's				
Category 3							
Ffff - Assistant			Master's				
Category 4							
Gggg- Professor (X)			Full				
Etc.							

1. *This is the budget unit paying the salary: department, school, research centre or institute, or other.*
2. *Indicate the level of supervisory privileges held by each faculty member: e.g., full, master's only, co-supervision only, etc.,*
3. *Either give the field name or a footnote reference to it.*
4. *List faculty members under the categories suggested, as applicable*

Category 1: tenured or tenure-track core faculty members whose graduate involvement is exclusively in the graduate program under review. For this purpose the master's and doctoral streams of a program are considered as a single program. Membership in the graduate program, not the home unit, is the defining issue.

Category 2: non-tenure-track core faculty members whose graduate involvement is exclusively in the graduate program under review.

Category 3: tenured or tenure-track core faculty members who are involved in teaching and/or supervision in other graduate program(s) in addition to being a core member of the graduate program under review.

Category 4: non-tenure track core faculty members who are involved in teaching and/or supervision in other graduate program(s) in addition to being a core member of the graduate program under review.

Category 5: other core faculty: this category may include emeritus professors with supervisory privileges and persons appointed from government laboratories or industry as adjunct professors. Please explain who would fall into this category at your institution.

Category 6: non-core faculty who participate in the teaching of graduate courses.

5.2.3 Physicals Facilities and Space

Departments are required to outline what physical facilities and spaces are used in the delivery of the program.

6. QUALITY INDICATORS

6.1 **UNDERGRADUATE** Commentary and Context of Data Sets

The Office of Institutional Research and Analysis (IRA) will provide programs going through the IQAP cyclical review with access to program-relevant data through the IQAP Portal link below which is can be accessed using the Internet Explorer browser:

<http://irtest2/Reports/Pages/Report.aspx?ItemPath=%2fIQAP%2fIQAP+Portal+Intro>

Please Note: For assistance or to request any **additional** data, programs can contact:

Jacy Lee, Associate Vice-President, Institutional Research and Analysis:
avpira@mcmaster.ca

General helpdesk:
irahelp@mcmaster.ca

The Quality Assurance Framework suggests that programs provide **context and commentary** on some of the following data (if available):

- i. **Faculty:** qualifications; research and scholarly record; class sizes; percentage of classes taught by permanent or non-permanent (contractual) faculty; numbers, assignments and qualifications of part-time or temporary faculty.
- ii. **Students:** applications and registrations; attrition rates; time-to-completion; final-year academic achievement; graduation rates; academic awards; student in-course reports on teaching.
- iii. **Graduates:** rates of graduation; employment six months and two years after graduation; postgraduate study; alumni reports on program quality when available.

Below is a sample of the type of data that can be accessed through the portal for undergraduate programs. Programs are asked to provide **context and commentary** on the available data.

UNDERGRADUATE	
AVAILABLE NOW	Previous (Minimum) <ul style="list-style-type: none">• Grade Point Average (AY 2010/11-2014/15)• Academic Standing (AY 2010/11-2014/15)*• Headcount (AY 2010/11-2014/15)*• Dean/Provost honour list (AY 2010/11-2014/15)*

	<p>New</p> <ul style="list-style-type: none"> • Fall-Winter Average (AY 2010/11-2014/15)* • Course Grades (AY 2010/11-2014/15)* • Course Utilization (AY 2010/11-2014/15)* • Student units taught (AY 2010/11-2014/15)* • 1st year to 2nd year Retention (CA 2009-2013 Cohorts)* • Plan Movement (CA 2010-2014)* • Upper level retention (CA 2009-2013 Cohorts)* • Degrees awarded (CA 2011-2015), (CA 2011-2014)* • NSSE (2013-2014-2015)* • Full – Time Faculty (CA 2010-2015), (CA 2010-2014)* • In Program Survey Results (2015)
<p>AVAILABLE ON OCTOBER 1, 2016</p>	<p>Previous</p> <ul style="list-style-type: none"> • Grade Point Average (AY 2011/12-2015/16) • Academic Standing (AY 2011/12-2015/16) • Headcount (AY 2011/12-2015/16) • Dean/Provost honour list (AY 2011/12-2015/16) <p>New</p> <ul style="list-style-type: none"> • Fall-Winter Average (AY 2011/12-2015/16) • Course Grades (AY 2011/12-2015/16) • Course Utilization (AY 2011/12-2015/16) • Student units taught (AY 2011/12-2015/16) • 1st year to 2nd year Retention (CA 2010-2014 Cohorts) • Plan Movement (CA 2010-2015) • Upper level retention (CA 2010-2014 Cohorts)

6.2 **GRADUATE** Commentary and Context of Data Sets

The Office of Institutional Research and Analysis (IRA) will provide programs going through the IQAP cyclical review with access to program-relevant data through the IQAP Portal link below:

<http://irtest2/Reports/Pages/Report.aspx?ItemPath=%2fIQAP%2fIQAP+Portal+Intro>

Please Note: For assistance or to request any **additional** data, programs can contact:

Jacy Lee, Associate Vice-President, Institutional Research and Analysis:
avpira@mcmaster.ca

General helpdesk:
irahelp@mcmaster.ca

Below is a sample of the type of data that can be accessed through the portal for graduate programs. Programs are asked to provide **context and commentary** on the available data.

GRADUATE	
*AVAILABLE NOW	Previous (Minimum) <ul style="list-style-type: none"> • Time to Completion (AY 2007/08-2013/14 Cohorts) • Flow through data (AY 2007/08-2013/14 Cohorts) • Cohort data (AY 2007/08-2013/14 Cohorts)
	New <ul style="list-style-type: none"> • Degrees awarded (CA 2011-2015), (CA 2011-2014)* • Headcount (AY 2010/11-2014/15)* • CGPSS (2007 – 2010 - 2013)* • Full – Time Faculty (CA 2010-2015), (CA 2010-2014)*

Required Graduate Program Criteria:

6.2.1 Time-to-Completion

In addition to the data that is provided centrally by the Institutional Research and Analysis (IRA) office, the program should also provide a narrative on how students' time-to-completion is both monitored and managed in relation to the program's defined length and requirement.

6.2.2 Quality and Availability of Graduate Supervision

Please evaluate the quality and availability of graduate supervision using the template provided below.

Completed and Current Numbers of Thesis¹ Supervisions by Faculty Member						
Member	Completed			Current		
	Master's	PhD	PDF	Master's	PhD	PDF
Aaa						
Bbb						
Ccc						
Ddd						
Eee						
Ffff³	2(15)	3(10)	6	1(5)	0(3)	2
Gggg						

1. *If desired, columns (or an additional table) may be added to reflect the supervision of major research papers at the master's level. Do not include supervisory committee activity in this table.*
2. *Faculty members who are involved in more than one graduate program should list the number of students supervised in the program under review and, in parentheses, the total number of students supervised in all graduate programs. (e.g., Ffff is currently supervising 1 Master's student in the program under review and 5 in total.)*

Note: If there are different types of degrees (e.g., MA, PhD) separate categories should be added to the table

6.2.3 Evidence of Faculty, Student and Program Quality

Listed below are some of the indicators that departments may provide as evidence of faculty, student and program quality.

- **Faculty:** funding, honours and awards, and commitment to student mentoring;
- **Students:** grade-level for admission, scholarly output, success rates in provincial and national scholarships, competitions, awards and commitment to professional and transferable skills;
- **Program:**
 - evidence of a program structure and faculty research that will ensure the intellectual quality of the student experience, and commitment to development of professional and transferable skills;
 - evidence of sufficient and regular graduate level course offerings to ensure that students will be able to meet university requirements in terms of:
 - (1) the minimum number of course required,
 - (2) the level of courses required, and
 - (3) the timely completion of other required elements appropriate for the degree level (e.g., transfer exams, comprehensive exams).

7. PROGRAM ENHANCEMENT

Please discuss the following four areas identified below:

- ***Previous Concerns & Recommendations:*** Discuss any concerns or recommendations that were raised in previous reviews and outline any changes to the program that resulted from those recommendations. If any of these documents cannot be located, please contact IQAP at igap@mcmaster.ca.
- ***Quality Enhancement:*** Describe initiatives that have been undertaken to enhance teaching, learning and/or research environments and thus, the overall quality of the program. Please also discuss how these initiatives will be sustained.
- ***Areas of Improvement:*** Describe any areas within the program that have been identified, through the conduct of the Self-Study, as requiring improvement. Departments may also provide some narrative on an implementation plan for improvement.
- ***Areas of Enhancement:*** Provide information regarding any areas within the program, identified through the conduct of the Self-Study, that hold promise for enhancement.

8. SYSTEM OF GOVERNANCE

Outline evidence that a consultative and inclusive system of governance has been used on an ongoing basis to assess the program and implement changes as appropriate.

9. ACADEMIC SERVICES

Discuss the adequacy of support services used by the department to support students' success and contribute to the academic quality of each program under review. Services such as library and lab access, McMaster Institute for Innovation & Excellence in Teaching & Learning, Centre for Student Success, Student Accessibility Services, Office of International Affairs and student opportunities such as academic advising, study abroad opportunities, experiential education can be highlighted. Departments are encouraged to address any other resources which are available but that have not been identified above.

10. PARTICIPATION IN SELF-STUDY

The Self-Study should be a consultative and collaboratively produced document that represents the collective faculty perspective on the program's strengths, weaknesses, and opportunities for improvement and quality enhancement. Although a primary author is identified, core faculty should be involved in contributing to and providing feedback on the document. Student involvement is also highly encouraged. Indicate in this section who contributed to the Self-Study and their particular role in the process.

11. ADDITIONAL INPUT

Provide any input of others deemed to be relevant and useful, such as graduates of the program, representatives of industry, practical training programs, and employers.

APPENDIX A: UNDERGRADUATE DEGREE LEVEL EXPECTATIONS

	BACHELOR'S DEGREE <i>This degree is awarded to students who have demonstrated:</i>	BACHELOR'S DEGREE: HONOURS <i>This degree is awarded to students who have demonstrated:</i>
1. Depth and Breadth of Knowledge	<p>a) General knowledge and understanding of many key concepts, methodologies, theoretical approaches and assumptions in a discipline</p> <p>b) Broad understanding of some of the major fields in a discipline, including, where appropriate, from an interdisciplinary perspective, and how the fields may intersect with fields in related disciplines</p> <p>c) Ability to gather, review, evaluate and interpret information relevant to one or more of the major fields in a discipline</p> <p>d) Some detailed knowledge in an area of the discipline</p> <p>e) Critical thinking and analytical skills inside and outside the discipline</p> <p>f) Ability to apply learning from one or more areas outside the discipline</p>	<p>a) Developed knowledge and critical understanding of the key concepts, methodologies, current advances, theoretical approaches and assumptions in a discipline overall, as well as in a specialized area of a discipline</p> <p>b) Developed understanding of many of the major fields in a discipline, including, where appropriate, from an interdisciplinary perspective, and how the fields may intersect with fields in related disciplines</p> <p>c) Developed ability to: i) gather, review, evaluate and interpret information; and ii) compare the merits of alternate hypotheses or creative options, relevant to one or more of the major fields in a discipline</p> <p>d) Developed, detailed knowledge of and experience in research in an area of the discipline</p> <p>e) Developed critical thinking and analytical skills inside and outside the discipline</p> <p>f) Ability to apply learning from one or more areas outside the discipline</p>
2. Knowledge of Methodologies	<p>An understanding of methods of enquiry or creative activity, or both, in their primary area of study that enables the student to:</p> <p>a) evaluate the appropriateness of different approaches to solving problems using well established ideas and techniques; and</p> <p>b) devise and sustain arguments or solve problems using these methods.</p>	<p>An understanding of methods of enquiry or creative activity, or both, in their primary area of study that enables the student to:</p> <p>a) evaluate the appropriateness of different approaches to solving problems using well established ideas and techniques;</p> <p>b) devise and sustain arguments or solve problems using these methods; and</p> <p>c) describe and comment upon particular aspects of current research or equivalent advanced scholarship.</p>
3. Application of Knowledge	<p>The ability to review, present, and interpret quantitative and qualitative information to:</p> <p>a) develop lines of argument;</p> <p>b) make sound judgments in accordance with the major theories, concepts and methods of the subject(s) of study; and</p> <p>The ability to use a basic range of established techniques to:</p> <p>a) analyze information;</p> <p>b) evaluate the appropriateness of different approaches to solving problems related to their area(s) of study;</p> <p>c) propose solutions; and</p> <p>d) make use of scholarly reviews and primary sources.</p>	<p>The ability to review, present and critically evaluate qualitative and quantitative information to:</p> <p>a) develop lines of argument;</p> <p>b) make sound judgments in accordance with the major theories, concepts and methods of the subject(s) of study;</p> <p>c) apply underlying concepts, principles, and techniques of analysis, both within and outside the discipline;</p> <p>d) where appropriate use this knowledge in the creative process; and</p> <p>The ability to use a range of established techniques to:</p> <p>a) initiate and undertake critical evaluation of arguments, assumptions, abstract concepts and information;</p> <p>b) propose solutions;</p> <p>c) frame appropriate questions for the purpose of solving a problem;</p> <p>d) solve a problem or create a new work; and</p> <p>e) to make critical use of scholarly reviews and primary sources.</p>
4. Communication Skills	The ability to communicate accurately and reliably, orally and in writing to a range of audiences.	The ability to communicate information, arguments, and analyses accurately and reliably, orally and in writing to a range of audiences.
5. Awareness of Limits of Knowledge	An understanding of the limits to their own knowledge and how this might influence their analyses and interpretations.	An understanding of the limits to their own knowledge and ability, and an appreciation of the uncertainty, ambiguity and limits to knowledge and how this might influence analyses and interpretations.
6. Autonomy and Professional Capacity	<p>Qualities and transferable skills necessary for further study, employment, community involvement and other activities requiring:</p> <p>a) the exercise of personal responsibility and decision-making;</p> <p>b) working effectively with others;</p> <p>c) the ability to identify and address their own learning needs in changing circumstances and to select an appropriate program of further study; and</p> <p>d) behaviour consistent with academic integrity and social responsibility.</p>	<p>Qualities and transferable skills necessary for further study, employment, community involvement and other activities requiring:</p> <p>a) the exercise of initiative, personal responsibility and accountability in both personal and group contexts;</p> <p>b) working effectively with others;</p> <p>c) decision-making in complex contexts;</p> <p>d) the ability to manage their own learning in changing circumstances, both within and outside the discipline and to select an appropriate program of further study;</p> <p>e) and behaviour consistent with academic integrity and social responsibility.</p>

APPENDIX B: GRADUATE DEGREE LEVEL EXPECTATIONS

	MASTER'S DEGREE <i>This degree is awarded to students who have demonstrated:</i>	DOCTORAL DEGREE <i>This degree extends the skills associated with the Master's degree and is awarded to students who have demonstrated:</i>
1. Depth and Breadth of Knowledge	A systematic understanding of knowledge, and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of the academic discipline, field of study, or area of professional practice.	A thorough understanding of a substantial body of knowledge that is at the forefront of their academic discipline or area of professional practice.
2. Research and Scholarship	A conceptual understanding and methodological competence that: i) Enables a working comprehension of how established techniques of research and inquiry are used to create and interpret knowledge in the discipline; ii) Enables a critical evaluation of current research and advanced research and scholarship in the discipline or area of professional competence, and iii) Enables a treatment of complex issues and judgments based on established principles and techniques; and, On the basis of that competence, has shown at least one of the following: i) The development and support of a sustained argument in written form, or ii) Originality in the application of knowledge.	a. The ability to conceptualize, design, and implement research for the generation of new knowledge, applications, or understanding at the forefront of the discipline, and to adjust the research design or methodology in the light of unforeseen problems; b. The ability to make informed judgments on complex issues in specialist fields, sometimes requiring new methods; and c. The ability to produce original research, or other advanced scholarship, of a quality to satisfy peer review, and to merit publication;
3. Application of Knowledge	Competence in the research process by applying an existing body of knowledge in the critical analysis of a new question or of a specific problem or issue in a new setting.	The capacity to: i) Undertake pure and/or applied research at an advanced level; and ii) Contribute to the development of academic or professional skills, techniques, tools, practices, ideas, theories, approaches, and/or materials;
4. Communication Skills	The ability to communicate ideas, issues and conclusions clearly.	The ability to communicate complex and/or ambiguous ideas, issues and conclusions clearly and effectively.
5. Awareness of Limits of Knowledge	Cognizance of the complexity of knowledge and of the potential contributions of other interpretations, methods, and disciplines.	An appreciation of the limitations of one's own work and discipline, of the complexity of knowledge, and of the potential contributions of other interpretations, methods, and disciplines.
6. Autonomy and Professional Capacity	a. The qualities and transferable skills necessary for employment requiring i) The exercise of initiative and of personal responsibility and accountability; ii) Decision-making in complex situations; and b. The intellectual independence required for continuing professional development; c. The ethical behaviour consistent with academic integrity and the use of appropriate guidelines and procedures for responsible conduct of research; d. The ability to appreciate the broader implications of applying knowledge to particular contexts.	a. The qualities and transferable skills necessary for employment requiring the exercise of personal responsibility and largely autonomous initiative in complex situations; b. The intellectual independence to be academically and professionally engaged and current; c. The ethical behaviour consistent with academic integrity and the use of appropriate guidelines and procedures for responsible conduct of research; and d. The ability to evaluate the broader implications of applying knowledge to particular contexts.

Ontario Universities' Degree Level Expectations are available as part of the Quality Assurance Framework policy document available at: <http://www.cou.on.ca/quality>

APPENDIX C: CURRICULUM MAP TEMPLATE FOR UNDERGRADUATE PROGRAMS

Mapping Courses to Program Learning Outcomes:

Program name

Program Learning Outcomes	Associated DLE(s)	Course Code			
		Required course or optional core?			
<u>PLO #1</u> By the end of the program, the student will be able to...		Teaching	Indicate the level (basic, intermediate, advanced) at which the PLO is covered. Provide examples where appropriate.		
		Assessment	Indicate what assessments you use to determine the extent to which this outcome is achieved by the end of your course. Provide examples where appropriate.		
<u>PLO #2</u> By the end of the program, the student will be able to...		Teaching	Indicate the level (basic, intermediate, advanced) at which the PLO is covered. Provide examples where appropriate.		
		Assessment	Indicate what assessments you use to determine the extent to which this outcome is achieved by the end of your course. Provide examples where appropriate.		
<u>PLO #3</u> By the end of the program, the student will be able to...		Teaching	Indicate the level (basic, intermediate, advanced) at which the PLO is covered. Provide examples where appropriate.		
		Assessment	Indicate what assessments you use to determine the extent to which this outcome is achieved by the end of your course. Provide examples where appropriate.		
<u>PLO #4</u> By the end of the program, the student will be able to...		Teaching	Indicate the level (basic, intermediate, advanced) at which the PLO is covered. Provide examples where appropriate.		
		Assessment	Indicate what assessments you use to determine the extent to which this outcome is achieved by the end of your course. Provide examples where appropriate.		
<u>PLO #5</u> By the end of the program, the student will be able to...		Teaching	Indicate the level (basic, intermediate, advanced) at which the PLO is covered. Provide examples where appropriate.		
		Assessment	Indicate what assessments you use to determine the extent to which this outcome is achieved by the end of your course. Provide examples where appropriate.		

APPENDIX D: CURRICULUM MAP TEMPLATE FOR GRADUATE PROGRAMS

Program Learning Outcomes (PLOs)	Program Requirements		
By the end of the program, student graduating with a Masters degree will...	Master's Degree Level Expectations (DLEs)	Teaching Activities & Learning Opportunities	Assessments and Evidence
	For each PLO, identify which DLE(s) it aligns with below.	For each PLO, what teaching activities and learning opportunities are students exposed to that will help them to achieve that PLO?	For each PLO, what is specifically collected from the student as evidence that they can/have achieved the PLO before they graduate?

Program Learning Outcomes (PLOs)	Program Requirements		
By the end of the program, students graduating with a Ph.D. will ...	PhD Degree Level Expectations (DLEs)	Teaching Activities & Learning Opportunities	Assessments and Evidence

