Department of Computer Science

University of Victoria

Graduate Handbook

Associate Chair, Graduate Last Updated: 26 September 2024

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1. RESPONSIBILITIES IN THE SUPERVISORY RELATIONSHIP

Faculty and students are bound by policies set by the University, Faculty of Graduate Studies, and this Department.

The Faculty of Graduate Studies policies are provided in the academic Graduate Calendar and in policy documents found on the Faculty of Graduate Studies website: <u>uvic.ca/graduatestudies</u>. In particular, students and faculty members should read the <u>Graduate Supervision Policy</u>, which outlines the rights and responsibilities in the supervisory relationship.

2. CONTACT INFORMATION

The identities, contact information and roles of the primary resource personnel in the academic unit:

Updated – August 2024	Name	Office	Telephone	e-mail
Department Chair	Dr. Kevin Stanley	ECS 504a	250-472-5704	chair@csc.uvic.ca
Associate Chair, Graduate	Dr. Miguel Nacenta	ECS 524	250-472-5766	cscgradachair@uvic.ca
Graduate Program Assistant	Aimee Coueslan	ECS 504	250-472-5703	cscgsec@uvic.ca
Graduate Co-op Coordinator	Contact Co-op Main Office	ECS 204	250-472-5800	engrcoop@uvic.ca
Student representative		n/a	n/a	

3. COMPOSITION OF GRADUATE STUDIES COMMITTEE

The department maintains a Graduate Studies Committee composed of faculty members from the department. The responsibilities of this committee include such tasks as admission decisions, curriculum deliberations, administration of policies and procedures, and determinations of graduate awards. The Associate Chair, Graduate is the Chair of this committee. The Associate Chair, Graduate is the formal liaison officer between the department and the Faculty of Graduate Studies.

4. MASTER'S PROGRAM REQUIREMENTS

Students admitted to the Master's program are expected to write and defend successfully a thesis or a project, to fulfill the CSC course requirements together with the breadth requirement, and to have yearly progress reports.

4.1 MSc Degree Program- Thesis Option

4.1.1 Course Requirements (applicable to students entering after Aug. 2018)

The Master's Program consists of a minimum of 15 units, which include course work, a Research Skills course (CSC 595) and a Master's thesis (CSC 599). All courses are valued at 1.5 units. At least 13.5 units of the program must be at the 500 level or higher. The remaining units must be at the 400 level or higher. A typical program would include: CSC 595 (1.5 units); three CSC courses at the 500 level (4.5 units); one CSC course at the 400 or 500 level (1.5 units); and the Master's thesis, CSC 599 (7.5 units). When a course is cross-listed with 400 or 500 levels, graduate students must select the 500-level section if the course credits are counted towards their postgraduate degree.

A typical thesis program includes:

- the research skills' course (CSC 595) [1.5 units],
- three CSC courses at the 500 level [4.5 units],
- one CSC course at the 400 or 500 level [1.5 units],
- the Master's thesis (CSC 599) [7.5 units].

Note that at most one Graduate Directed Study course (CSC 591) can be taken. Any exception needs to get approval from the graduate studies committee.

Each student must satisfy the MSc Breadth Requirements, defined as follows:

- No more than two courses in the MSc program should be in the same category of the thesis topic.
- Variations are acceptable if documented and approved by the supervisory committee.
- The supervisory committee is responsible for checking that the breadth requirement is satisfied correctly according to the expectations and to any variations. Explicit notes must be included about the breadth requirement at every progress report.
- In order to define the breadth requirements, three major categories are identified within computer

science. Each category is subdivided into areas that represent a range of the fields of computer science, as given in the table below.

CATEGORIES	Systems	Theory	Applications
	Software Engineering	Design and Analysis of Algorithms	Databases
А	Programming Languages	Scientific Computing	Artificial Intelligence
R	Hardware and Software Systems	Complexity Theory	Bioinformatics
E	Networks and Distributed Systems	Logic and Discrete Mathematics	Graphics and User Interfaces
S	Other areas	Other areas	Other areas

Areas not listed explicitly can still be perfectly acceptable. However, it is up to the student to justify in which category they should be classified and their academic value to the doctoral program. As an example, the area of "Databases" might fit entirely within the "Applications" category, or it may be considered as an area in either the "Theory" or "Systems" category, depending on the academic content being evaluated.

4.1.2 MSc Thesis and Oral Examination

The Faculty of Graduate Studies states the following guidelines regarding an acceptable thesis for a successful MSc program.

A master's thesis is an original lengthy essay which demonstrates a student's understanding of, and capacity to, employ research methods appropriate to their discipline(s). It should normally include a general overview of relevant literature in the field of study, be well organized and academically written. The work may be based on a body of original data produced by the student or it may be an original research exercise conducted using scholarly literature or data produced and made available by others.

In general, a master's candidate must demonstrate a command of the subject of the thesis. A thesis demonstrates that appropriate research methods have been used and appropriate methods of critical analysis supplied. It provides evidence of some new contribution to the field of existing knowledge or a new perspective on existing knowledge.

The student will give an oral examination of the thesis in accordance with the departmental and university regulations. Upon successful completion of the oral examination and all other departmental and university requirements, the student will be awarded the degree of Master of Science.

4.1.3 Expected Program Length

The department expects students to complete their Master's degree within the time limits set by the Faculty of Graduate Studies. Most students complete their program within two years. Students enrolled in a co-operative education program will have additional months added to the normal completion time equal to the time registered in Co-op work terms.



4.2 MSc Degree Program- Project Option

4.2.1 Course Requirements

Students may register for a Master's project (CSC 598) instead of a thesis, valued at 3 units. The Master's Program still consists of a minimum of 15 units which include CSC course work, a research skills' course (CSC 595) and the Master's project (CSC 598). All courses are valued at 1.5 units. At least 12 units of the program must be at the 500 level or higher. The remaining units must be at the 400 level or higher. When a course is cross-listed with 400 or 500 levels, graduate students must select the 500-level section if the course credits are counted towards their postgraduate degree.

A typical project program would include:

- the research skills' course (CSC 595) [1.5 units],
- five CSC courses at the 500 level [7.5 units],
- two CSC courses at the 400 or 500 level [3 units],
- the Master's project (CSC 598) [3 units].

Each student must satisfy the MSc Breadth Requirements, defined as follows:

- No more than three courses in the MSc program should be in the same category of the thesis topic.
- Variations are acceptable if documented and approved by the supervisory committee.
- The Supervisory Committee is responsible for checking that the breadth requirement is satisfied correctly according to the expectations and to any variations. Explicit notes must be included about the breadth requirement at every progress report.
- The categories are the same as stated in Section 4.1.1.

4.2.2 MSc Project and Oral Examination

An MSc project is smaller than a thesis both in scope and implementation. The following points remain in common with the expectations for a thesis, albeit on a smaller scale.

- The project must demonstrate that a student understands and is capable of employing research methods and has command of the subject.
- The amount of work required to complete the project should be equivalent to two, 1.5 unit courses.
- The project should show evidence of perspective on the topic and show that appropriate methodology has been understood and applied.
- The project document should show that the student is capable of writing a professional technical document.

A student who chooses the project option will also have an oral examination. This examination will cover the project as well as material from three courses chosen by the student's supervisory committee in consultation with the student.

4.2.3 Expected Program Length

The department expects students to complete their Master's degree within the time limits set by the Faculty of Graduate Studies. Most students complete their program within three years. Students enrolled in a co-operative education program will have additional months added to the normal completion time equal to the time registered in Co-op work terms.

4.3 MSc Degree Program- Industrial Option

4.3.1 Course Requirements

Students may register for an Industrial Master's project (CSC 597) instead of a thesis, valued at 1.5 units. The Master's Program still consists of a minimum of 15 units which include CSC course work, a research skills' course (CSC 595) and the Industrial Master's project (CSC 597). All courses are valued at 1.5 units. At least 12 units of the program must be at the 500 level or higher. The remaining units must be at the 400 level or higher. When a course is cross-listed with 400 or 500 levels, graduate students must select the 500-level section if the course credits are counted towards their postgraduate degree.

A typical master's industrial program would include:

- the research skills' course (CSC 595) [1.5 units],
- six CSC courses at the 500 level [9 units],
- two CSC courses at the 400 or 500 level [3 units],
- the Master's project (CSC 597) [1.5 units].

Each student must satisfy the MSc Breadth Requirements, defined as follows:

- No more than three courses in the MSc program should be in the same category of the thesis topic.
- Variations are acceptable if documented and approved by the supervisory committee.
- The Supervisory Committee is responsible for checking that the breadth requirement is satisfied correctly according to the expectations and to any variations. Explicit notes must be included about the breadth requirement at every progress report.
- The categories are the same as stated in Section 4.1.1.

4.3.2 Industrial MSc Project and Oral Examination

An Industrial MSc project is smaller than a thesis or an MSc project both in scope and implementation. The following points remain in common with the expectations for a thesis, albeit on a smaller scale.

- The project must demonstrate that a student understands and is capable of employing research methods and has command of the subject.
- The amount of work required to complete the project should be equivalent to one 1.5-unit course
- The project should show evidence of perspective on the topic and show that appropriate methodology has been understood and applied.
- The project document should show that the student is capable of writing a professional technical document.

4.3.3 Expected Program Length

The department expects students to complete their Master's degree within the time limits set by the Faculty of Graduate Studies. Students enrolled in a co-operative education program will have additional months added to the normal completion time equal to the time registered in Co-op work terms.

4.4 MSc Committees

4.4.1 Student's Supervisory Committee

The student's program of study is under the direction of a supervisory committee, composed of a minimum of two members: An academic supervisor from the home academic unit plus at least one member who is normally from within the home academic unit. All committee members must be members of the Faculty of Graduate Studies or have had specific permission from the Dean of Graduate Studies to serve as a member. The chair of the committee is the academic supervisor who is from the Department of Computer Science, under whose supervision the student is carrying out the major work of the MSc

program. The other member of the supervisory committee is normally also from the Department of Computer Science, but can be from outside the department.

In the case of the project-based MSc or Industrial MSc, the supervisory committee consists of a minimum of two members: An academic supervisor from the home academic unit plus at least one member who is normally from within the home academic unit. The chair of the committee is the academic supervisor who is from the department of Computer Science, under whose supervision the student is carrying out the major work of the MSc program. The other member of the supervisory committee is normally also from the Department of Computer Science, but can be from outside the department.

4.4.2 Student's Oral Examining Committee

The final oral examining committee in the case of MSc program with a thesis shall consist of the supervisory committee plus one other external examiner who has had no previous involvement with graduate supervision of the candidate. Such an examiner is recommended to graduate studies in consultation between the student and the supervisor. The final oral examining committee must include at least one person from outside the Department of Computer Science. If the supervisory committee already includes a member from outside the Department of Computer Science, the examiner can be a member of the department. A chair of the oral examination committee is appointed by the Faculty of Graduate Studies for a MSc thesis oral examination.

The final oral examining committee in the case of a MSc program with a project (project-based MSc or Industrial MSc) shall consist of the supervisory committee plus a chair who is normally a member of the Department of Computer Science. A chair of the oral examination committee is found by the supervisor of the student.

5. PHD PROGRAM REQUIREMENTS

5.1 PhD Course Requirements

For students entering with a Master's degree, the PhD program consists of a minimum of six units of CSC course work at the 500 level or higher, that is, four graduate courses.

For students admitted to the PhD Program with a Bachelor's degree, the requirement is a minimum of twelve units of CSC course work (eight courses), where at least nine units (six courses) must be at the 500 level or higher.

For all students, a PhD program must include the research skills' course (CSC 595, 1.5 units), which is to be over and above the CSC course work required. If a student has already taken an equivalent research skills' course during the course of a previous graduate program, an exemption can be applied for by the student in the form of a brief written request, to be approved by the Graduate Studies Committee and by the Faculty of Graduate Studies. When a course is cross-listed with 400 or 500 levels, graduate students must select the 500-level section if the course credits are counted towards their postgraduate degree.

5.2 MSc Transfer to PhD Course Requirements

A student currently enrolled in the master's program who wishes to transfer directly to the PhD program without completing the master's degree may be recommended to the Dean of Graduate Studies by the Graduate Studies Committee in the academic department of the transfer. Requests for transfer will be considered at any time after two terms in a master's program.

This is an exceptional case, when a student and the supervisor may decide that a direct transfer from a MSc graduate program into a PhD graduate program is an appropriate choice, without finishing all the requirements of the MSc. Normally the student has taken all the required CSC course work and is well advanced in a research program, but it does not seem necessary to submit a complete MSc thesis document and have an oral defense. For example, this could be the case when the research already completed for the MSc thesis has developed into original work of considerably larger scope and can easily be extended to become a PhD dissertation.

Completion is required within seven years from the date of the first registration in the master's program. Students who are recommended for transfer to the doctoral program within the same department are not normally required to submit additional assessment reports.

The main goal is to have a proposal for transfer, prepared by a student in consultation with the academic supervisor, approved by the Dean of Graduate Studies, with formal support from the student's supervisory committee and from the department's Graduate Committee. The expected procedural steps to be initiated and followed by a student are:

- 1. discussion with supervisor;
- 2. discussion with Associate Chair, Graduate (recommended);
- 3. submission of a written proposal for transfer, outlining the reasons, to the supervisor and to the supervisory committee;
- 4. discussion, possible meeting and approval from the members of the student's Supervisory Committee and the supervisor;
- 5. the student will need to apply for re-registration through the <u>online application</u> system. You will be required to submit a <u>course retention request form</u> as part of your application.
- 6. submission of the written proposal for transfer and a letter of support for the transfer from the supervisory committee to the departmental graduate studies committee;
- 7. after the approval of the graduate studies committee: submission of the written proposal for transfer, the letter of support from the supervisory committee and a letter of support from the Associate Chair, Graduate, on behalf of the graduate studies committee, to the dean of graduate studies.

Note that a few items are implicit in this process, namely:

- a student's supervisory committee is already in place for the current MSc graduate program and the proposal includes extra name(s) for members of the possible new PhD supervisory committee;
- the procedures are mainly driven by the student with support of the supervisor;
- the proposal for transfer should include both the research items and the administrative items pertinent to the transfer (e.g. plans for the breadth requirements).



5.3 PhD Breadth Requirements

Note: The Breadth Requirement will be changing as of January 1, 2022. For proposals submitted before that date, the old Requirement, as specified in 5.3.1 and 5.3.2, is still in effect. The new requirement is given in 5.3.3 and 5.3.4

5.3.1 Requirements (Before Jan. 1, 2022)

The department of Computer Science believes that any candidate for a PhD degree, before graduating, must show a firm grasp of the overall field of Computer Science. The PhD breadth requirement ensures that this goal is fulfilled, normally by taking advanced CSC courses in a broad range of categories and areas.

In order to define the breadth requirements, three major categories are identified within Computer Science. Each category is subdivided into areas that represent a range of the fields of computer science, as given in the table below.

CATEGORIES	Systems	Theory	Applications
	Software Engineering	Design and Analysis of Algorithms	Databases
Α	Programming Languages	Scientific Computing	Artificial Intelligence
	Hardware and Software Systems	Complexity Theory	Bioinformatics

R	Networks and Distributed Systems	Logic and Discrete Mathematics	Graphics and User Interfaces
AS	Other areas	Other areas	Other areas

Areas not listed explicitly can still be perfectly acceptable. However, it is up to the student to justify in which category they should be classified and their academic value to the doctoral program. As an example, the area of "Databases" might fit entirely within the "Applications" category, or it may be considered as an area in either the "Theory" or "Systems" category, depending on the academic content being evaluated.

Normally the breadth requirement is fulfilled by CSC courses in the appropriate areas and categories. Other verifiable experience may be acceptable at the discretion of the CSc Graduate Studies Committee. The requirement is specified in terms of number of courses selected from each of the categories as described in the following:

- Include at least seven courses (equivalent at UVic to 10.5 units). Five of them must be graduate courses. Two of them can be 4th year undergraduate courses. (Note: a student may be allowed to make arrangements to upgrade a previous 4XX level course to a graduate level course).
- Each category, namely Systems, Theory and Applications, must be covered by at least one of the graduate courses, but no more than one category can be covered by only one course (that is, a distribution of five courses in one category and one course for each of the two remaining categories is not acceptable).
- The minimum grade required for each course is the equivalent of B.
- Under exceptional circumstances, up to two relevant courses outside of CSc may be used, subject to approval by the student's Supervisory Committee and the CSc Graduate Studies Committee.

5.3.2 Procedure for Breadth Requirements

Step 1: By the end of the first term of entering a PhD program, a new student prepares a document, in collaboration with the supervisor, detailing relevant past courses and future plans for graduate courses. The document is to be submitted to your department graduate program assistant who will forward it for evaluation to the CSc Graduate Committee and it should include:

- Courses or equivalent (including theses) which can be used to fulfill part of the breadth requirement.
- A proposed program of study which the student intends to complete in order to fulfill the remaining part of the breadth requirement.
- A preliminary schedule of when courses will be taken.

Both a template/form and a sample successful proposal are provided as guidelines for an effective document. [Refer to the department website – <u>Graduate Resources</u>]

Step 2: The CSc Studies Graduate Committee must be able to determine a possible equivalence of the courses used to fulfill the requirement, as compared to known CSC courses at UVic. The student must provide sufficient evidence that a course (or other experience) listed does indeed fulfill an area requirement. Pertinent information includes course syllabi, textbooks used, descriptions of prerequisites or co-requisites, evaluation from the instructor, and copies of relevant entries from university calendars. The CSc Graduate Studies Committee evaluates the Breadth Requirement submission at the next available meeting. The CSc Graduate Studies Committee, through the Associate Chair, Graduate, will ask the student for more information in cases of doubt, and will consult with experts in the department as it deems appropriate. This first approval step must be completed by the end of the second term of the PhD program.

Step 3: The Graduate Studies Committee will be the final arbiter of whether courses taken and marks obtained satisfy the requirement. The breadth requirement must be completed within five terms of the student's initial registration as a PhD student, and in any case, before the student graduates, although it need not be completed before other checkpoints (e.g. before the Candidacy Examination). The Graduate Studies Committee is empowered to vary all specific time constraints listed in these regulations for students in special situations, after a written request is received, together with the supervisor's support. The Committee will do so only after giving appropriate consideration to the individual case, as long as the decisions are consistent with the aim that the breadth requirements should be completed as early as convenient in the program.

As of January 1, 2022, the Breadth Requirement will be as follows:

5.3.3 Requirements (After Jan. 1, 2022)

The Department of Computer Science believes that any candidate for a PhD degree, before graduating, must show a firm grasp of the overall field of Computer Science. The PhD breadth requirement ensures that this goal is fulfilled, normally by taking advanced CSC courses in a broad range of categories and areas.

In order to define the breadth requirements, three major categories are identified within Computer Science. These categories are Applications, Systems and Theory.

Normally the breadth requirement is fulfilled by CSC courses. Other verifiable experience may be acceptable at the discretion of the CSc Graduate Studies Committee. The requirement is specified in terms of number of courses selected from each of the categories as described in the following:

- Include at least seven courses (equivalent at UVic to 10.5 units). Five of them must be graduate courses. Two of them can be 4th year undergraduate courses. (Note: a student may be allowed to make arrangements with the course instructor to upgrade a previous 4XX level course to a graduate level course).
- Each category, namely Systems, Theory and Applications, *must* be covered by at least one 500-level U Vic CSC course. Categories for regularly listed courses may be found at <u>Graduate Resources</u>. *Topics courses will have a category specified in the official outline for the course*. The title of the course is not

sufficient for determining the area. Directed Studies courses are not eligible for the fulfilment of this part of the requirement, nor is "other verifiable experience".

- The minimum grade required for each course is the equivalent of B. In the case that a grade of below B is obtained for a course, it is the responsibility of the student and supervisor to ensure that any remedial action is consistent with the Breadth Proposal. In case it is not, a new Breadth Proposal must be submitted and approved by the committee.
- Under exceptional circumstances, up to two relevant courses outside of CSc may be used, subject to approval by the student's Supervisory Committee and the CSc Graduate Studies Committee. The Breadth Proposal should provide a rationale for each non-CSc course.

5.3.4 Procedure for Breadth Requirements

Step 1: By the end of the first term of entering a PhD program, a new student prepares a document, in collaboration with the supervisor, detailing relevant past courses and future plans for graduate courses. The document is to be submitted to your department graduate program assistant who will forward it for evaluation to the CSc Graduate Committee and it should include:

- Courses or equivalent (including theses) which can be used to fulfill part of the breadth requirement.
- A proposed program of study which the student intends to complete in order to fulfill the remaining part of the breadth requirement.
- A preliminary schedule of when courses will be taken.

A sample successful proposal is provided as a guideline for an effective document. [Refer to the department website – <u>Graduate Resources</u>]

Step 2: The Graduate Studies Committee will be the final arbiter of whether courses taken and marks obtained satisfy the requirement. The breadth requirement must be completed within five terms of the student's initial registration as a PhD student, and in any case, before the student graduates, although it need not be completed before other checkpoints (e.g. before the Candidacy Examination). The Graduate Studies Committee is empowered to vary all specific time constraints listed in these regulations for students in special situations, after a written request is received, together with the supervisor's support. The Committee will do so only after giving appropriate consideration to the individual case, as long as the decisions are consistent with the aim that the breadth requirements should be completed as early as convenient in the program.

5.4 PhD Candidacy Examination

5.4.1 General Guideline for Candidacy Examination

Each student must pass the **CSC 693** within two years of first registering as a provisional doctoral student and at least six months before the PhD dissertation is defended in an oral exam. A PhD student should

be registered in CSC 693 from the start of the program. After passing CSC 693, a student should register in CSC 699. At any given time in the program, a PhD student should be registered in either CSC 693 or CSC 699, but not both.

The main purpose of the candidacy examination is to test the student's understanding of material considered essential to completion of a PhD and the student's competence to do research that will culminate in the PhD dissertation. There are a number of other objectives to be considered when preparing for the Candidacy Examination (listed without priorities).

- To educate the Supervisory Committee so that they are better prepared to guide the research and make helpful suggestions.
- To ensure that the student is aware of and has considered the important background material in the area.
- To ensure the student understands and can communicate descriptions of the problem(s) and the significance.
- To communicate among students and the committee expectations regarding what might constitute research worthy of a PhD dissertation. To resolve any conflicts between parties on expectations early on, instead of after the research has been completed.
- To protect the student from overly high expectations which result in staying too long in the program in order to benefit the research program of the supervisor.
- To ensure the student has realistic expectations of the amount of work which needs to be accomplished. The written material of the proposal can be reused as a starting point for a dissertation.
- To ensure the student has selected problems of an appropriate difficulty (not way too hard or way too easy) and has a proposal which should lead to a PhD.
- To clarify short-and long-term research goals and identify steps which can be taken to start making progress on the research.
- To enable the committee to make suggestions which can provide guidance for the research or to ask questions that may be relevant, but are not being considered.
- To introduce formally the candidate to the committee and the committee to the candidate.

5.4.2 Procedure for Candidacy Examination

While there may be wide variety in the content of candidacy examinations, all such examinations must be consistent within each department. Factors that must be consistent are the manner in which the examinations are constructed, conducted and evaluated. Departments are responsible for ensuring this consistency. The steps normally expected to be followed are:

- 1. The candidate is required to submit a short written research proposal to the Supervisory Committee at least two weeks before the arranged date of the examination.
- 2. The research proposal should follow the normal standards for the field, including statements of the problems, new ideas and their feasibility, methodology of research, milestones and expected results, plans for experiments, background and previous work of others. The content and length of the proposal is negotiable with the Supervisory Committee, but it is normally comprised of no more than five pages for the proposal of new research plus an appropriate number of pages for the background (similarly to a grant proposal).
- 3. On the day of the examination, the candidate is required to make a short (15-20 minute) presentation to the Supervisory Committee. The presentation is to be followed by an oral examination.

- 4. To pass the candidacy, the committee must be satisfied that: the research proposal forms a viable basis for a PhD dissertation, and the candidate is sufficiently informed in the field of research that has been proposed. The evaluation is based on: (i) the written proposal; (ii) the presentation; (iii) the oral examination.
- 5. If the committee is not satisfied, they may request that the candidate re-take the examination, provided that the examination is held within the two years specified by the regulations of the Faculty of Graduate Studies.
- 6. When a student has successfully completed the candidacy examination(s), the supervisor should inform the graduate program assistant who will prepare the Program Update form to be signed by the student, the student's supervisor and the chair of the department. The form will be submitted to the Graduate Admissions and Records Office for manual data entry to update the student's record with the academic milestone.

All members of the Supervisory Committee are expected to evaluate the student for the candidacy and be present at the oral examination. The supervisor must always be present. At most one other member of the Supervisory Committee may be absent from the candidacy examination.

If a member of the Supervisory Committee is unable to attend the candidacy examination, but is able to evaluate in depth the research proposal, written feedback can be collected. A substitution can be made for the exam only. Appropriate questions should be posed by the temporary member on behalf of the absentee.

If a member of the Supervisory Committee is unable to participate at all in the candidacy procedure, a new member of the Supervisory Committee should be appointed.

In all cases, it is the responsibility of the student and of the academic supervisor to make sure that all evaluation aspects are properly integrated in the program. This implies that, in all cases, constructive feedback is collected and actions for future research is discussed and planned accordingly.

Upon successful completion of the Candidacy Examination, the student is automatically classified as a candidate for the degree of Doctor of Philosophy.

Upon failure to pass the Candidacy examination, the student is permitted to take another Candidacy examination. The student may be permitted to complete a Master's degree subject to the approval of Faculty of Graduate Studies.

5.5 PhD Dissertation and Oral Examination

The Faculty of Graduate Studies states the following guidelines in the Graduate Academic Calendar regarding an acceptable dissertation for a successful PhD program.

The doctoral dissertation must embody original work and constitute a significant contribution to knowledge in the candidate's field of study. It should contain evidence of broad knowledge of the relevant literature, and should demonstrate a critical understanding of the works of scholars closely related to the subject of the dissertation. Material embodied in the dissertation should, in the opinion of scholars in the field, merit publication. The general form and style of dissertations may differ from department to department, but all dissertations shall be presented in a form which constitutes an integrated submission. The dissertation may include materials already published by the candidate, whether alone or in conjunction with others. Previously published materials must be fully integrated into the dissertation, while at the same time distinguishing the student's own work from the work of other researchers. At the final oral examination, the doctoral candidate is responsible for the entire content of the dissertation. This includes those portions of co-authored papers which comprise part of the dissertation.

The student will give an oral exam of the dissertation in accordance with the departmental and university regulations. Upon successful completion of the exam and all other departmental and university requirements, the student will be awarded the degree of Doctor of Philosophy.

5.6 Expected Program Length

The department expects students to complete their PhD degree within the time limits set by the Faculty of Graduate Studies. Most students complete their program within four years. Students enrolled in a cooperative education program will have additional months added to the normal completion time equal to the time spent on Co-op work terms.



5.7 PhD Committees

5.7.1 Student's Supervisory Committee

The student's program of study is under the direction of a Supervisory Committee is composed of a

minimum of three members: The academic supervisor from the home academic unit plus at least one other member from within the home academic unit plus at least one member from outside the home academic unit. All committee members must be members of the Faculty of Graduate Studies or have had specific permission from the Dean of Graduate Studies to serve as a member. Any regular member of the Faculty of Graduate Studies is eligible to serve.

5.7.2 Student's Examining Committee

This consists of the Supervisory Committee plus a Chair (appointed by the Dean of Graduate Studies) and at least one other External Examiner from outside the University. Such external examiners are recommended by the Supervisor to the Dean of Graduate Studies and are appointed by the Dean of Graduate Studies. The individual must be an arm's-length authority in the field of research being examined. The supervisor (co-supervisors) must complete the form: External Examiner's Confirmation of Arm's-Length Status (See: Graduate Studies website, link to *Forms*).

6. FORMAL REVIEW OF STUDENT PROGRESS

6.1 Purpose of the Annual Review

The purpose of the annual report is to support the successful progress of a student through a graduate program. The review of accomplishments and milestones achieved during a 12-month review period is a constructive tool to move forward successfully. Achievements need to be acknowledged and rewarded. Possible impediments need to be examined and actions for their removal agreed upon.

You are responsible for completing the annual progress report together with your supervisor(s) each year depending on your program start date. For example: If you started January, you will complete and submit a progress report in the months of November/December. If you started May, you will complete and submit a progress report in the months of March/April. If you started in September, you will complete and submit a progress report in the months of July/August. This is an internal department report.

Failure to submit a progress report might result in students being unable to register for the following term and will be reported to the department's Chair by the Associate Chair, Graduate.

6.2 Procedure for the Annual Review

The expected procedures for the submission of the annual report are as follows:

Students should supply the information required to complete a report well in advance of the submission deadline. This information includes: name and student number, courses, TA work, financial support, co-op work-terms, etc.

- 1. Supervisors should present the information, together with their evaluation, to the other members of the Supervisory Committee and collect any pertinent feedback.
- 2. Supervisors should summarize the complete evaluation from the committee in writing.
- 3. Students and supervisors should meet and discuss the evaluation.

- 4. Any actions expected for the continuing time in the program should be articulated in writing and agreed upon.
- 5. Students have the opportunity to attach their own comments in writing.
- 6. Both students and supervisors must sign the final document.

NOTE 1: The signature of the supervisor acknowledges that the supervisory committee has been consulted and the report has been discussed with the student.

NOTE 2: The signature of the student acknowledges that the report has been discussed with the supervisor and an opportunity given to include comments.

NOTE 3: The signature of the Associate Chair, Graduate acknowledges that the report has been received and reviewed.

A template form is available from the department as a *guide*. Any other format is acceptable as long as it includes the crucial elements, namely: the total work accomplished, the evaluation of the work by both the supervisor and by the supervisory committee, the comments by the students, any expectations for the future, and the relevant signatures and dates.

See: <u>https://www.uvic.ca/engineering/computerscience/assets/docs/grad/ProgressReport.pdf</u>

6.3 Outcome of the Annual Review

The academic progress is classified as satisfactory or unsatisfactory. An unsatisfactory performance indicates, for example, that the student does not pursue goals in a vigorous fashion, does not take direction well, shows disregard for ethics/safety, or repeatedly fails to complete routine procedures.

If the student's progress is satisfactory, the next review will be one year later. In the case of unsatisfactory progress, the supervisory committee shall give feedback and guidance in writing to the student for improvement. In this case, the supervisory committee needs to review the student's progress in 8 weeks, following the same review procedure. In the case of two determinations of 'unsatisfactory' progress on the assessment, the supervisory committee needs to submit a written recommendation whether or not to request the Associate Chair, Graduate make application to the Dean of Graduate Studies to withdraw the student for 'failure to meet academic standards,' as per subsections 6.15 and 12.3 of UVic <u>Graduate Supervision Policy</u>

7. FUNDING

7.1 Funding Source

There is the potential for several sources of financial support, including for example UVic Fellowships, UVic Graduate Awards, Research Assistant (TA) support, Teaching Assistant (TA) support, NSERC awards, and Co-op.

UVic Fellowships: The UVic Fellowships are awarded mainly on the basis of academic excellence to applicants who apply for a September entry point. All PhD and thesis-based MSc students registered full-

time are considered for a UVic Fellowship, based on the nomination from the student's supervisor, the evaluation by the Graduate Studies Committee, and the final approval by the Faculty of Graduate Studies. The amount for MSc students is \$13,500 per year with no renewal. The amount for PhD students is \$15,000 per year and may be renewed for a second year subject to you achieving first-class (A-) on courses and a recommendation from the department.

UVic Graduate Entrance Awards: All PhD and MSc students registered full-time are eligible for a UVic Entrance Award on their first year with amounts between \$5,000 and the maximum \$10,000). The UVic Graduate Awards are adjudicated based on the academic excellence evaluated by the Graduate Studies Committee. The UVic Graduate Awards are typically not renewable.

RA support: You may be offered research grant support (or from some alternative source funding, e.g. an industrial grant or contract) directly from your admitting supervisor. Separate application forms are not required. Note that the amount of RA support varies. Normally, domestic MSc students may receive \$13,392 in RA support; international MSc students \$14,026. Domestic PhD students may receive \$14,586 in RA support; international PhD students \$15,273 (the difference in amounts is geared to offset the differential in the fee structure).

All support payments are subject to satisfactory academic performance, research progress and the availability of funding.

Support payments from supervisors are typically for research-based programs and the amount of support varies. All financial commitments are made on an individual basis and the terms of funding support will be set out in the department offer and/or admission letter that students receive.

Note that students in the Industrial Master's program are not funded by the Department through graduate fellowships or RAs. Students in this program should arrange their own financial resources for both living and educational expenses.

TA support: Qualified students may apply for TA work approximately 12 weeks prior to the start of every term. Students must be registered full-time in an approved UVic graduate program to accept a TA position. There is no guaranteed number of hours. The rates for TA work and priority levels are set by the union (CUPE) contract with the university. *Qualified* students in the first two years of a Master's program or in the first four years of a PhD program have priority in obtaining TA employment over students who are in a later year of their program. *You must apply separately for a TA position within the deadlines posted on our employment opportunities webpage*.

NSERC, Tri-Council and Google PhD Fellowship Awards: If you are a Canadian citizen or a permanent resident of Canada and your GPA is higher than 85%, you should consider applying for a Tri-council or NSERC post-graduate fellowship. Exceptional students (regardless of citizenship or permanent resident status) can apply for <u>Tri-council Vanier scholarships</u> and Google Scholarships. The NSERC, Tri-Council and Google scholarships/fellowships are very competitive and based on academic performance as well as other markers of excellence. These scholarships and fellowships are designed to cover the full financial needs of graduate students.

Students who are awarded any of these scholarships are not eligible to receive full UVic fellowship support while they have NSERC or Tri-Council full scholarships. UVic fellowship support from the Department of Computer Science is capped at \$6,000 for those awarded full NSERC, Tri-Council or Google PhD Fellowships.

Please visit the <u>Faculty of Graduate Studies Awards</u> page to learn more about applying for NSERC and other external awards.

Co-op: To be eligible for the Co-op program you will have completed at least two regular academic terms and follow the requirements outlined by the Co-op office. The co-op program is optional and is subject to the approval of your supervisor. For co-op designation, the Master's student will complete two work terms (maximum); PhD, three work terms (maximum). The Co-op program involves one or more work terms in addition to completing traditional academic terms. Please visit the <u>Co-op website</u> for more details.

7.2 Notification of Award Competitions

Whenever there are internal funding opportunities for students pertaining to stipends, awards, travel, *etc.*, the graduate program assistant will advertise the opportunities to faculty members and/or graduate students.

8. EXPECTED MEETING FREQUENCY

8.1 With your Supervisor

Students should meet with their supervisor on a regular basis. The purpose of these meetings is to discuss the student's research and progress. These meetings can be direct, virtual (e.g. via an online conferencing system), or through detail correspondence (e.g. via email). Students should meet with their supervisor at least twice each term, and the maximum interval between meetings should be at most 40 business days (unless there are extenuating circumstances, such as sick leave, supervisor or student vacation, etc.).

8.2 With your Supervisory Committee

Once a student has formed his/her supervisory committee, the student should meet with it on a regular basis. These meetings will provide an opportunity for the committee acquitted with the research of the student and to get updated with its progress. At the same time, the committee is expected to provide feedback to the student regarding the research. These meetings can be direct or virtual (e.g. via an online conferencing system). The maximum interval at which these meetings should be occur must not exceed 1 year (unless there are extenuating circumstances, such as sick leave, supervisor or student vacation, etc.).

9. EXPECTED TURNAROUND TIME OF ANNOTATED THESIS, DISSERTATION OR PAPER

Supervisors and members of the supervisory committee should provide prompt and appropriate feedback to student's research work (such as a thesis, dissertation or a paper). The maximum expected length of time required to provide such feedback should not exceed 20 business days (unless there are extenuating circumstances, such as sick leave, supervisor or student vacation, etc.).

10. PLACEMENT, CO-OP TERMS AND INTERNSHIPS

The approval to participate in Graduate Co-op and any internship should not conflict with the academic progress of a student and it is solely at discretion of the student's supervisor. It is strongly recommended that students discuss the intention to participate in Graduate Co-op or an internship with their supervisor early in their academic programs.

In some cases, one or more internships are a requirement of the funding provided to the student. In that case, a student might be expected to complete certain number of internships during her/his academic program. The number, duration and schedule of these internships should be indicated to the student by their supervisor at the time the funding offer is being made.

For co-op designation, the Master's student will complete two work terms (maximum); PhD, three work terms (maximum).

For further information regarding participation in the Graduate Co-Op program please contact the Engineering and Computer Science Co-op office.

11. REQUIRED THESIS AND DISSERTATION FORMATS

Students are expected to submit their Project or Thesis document following the formatting requirements from the Graduate Studies website. Many resources are available to the students and specifically, the *Thesis Writing Starter Kit* will help with writing theses, projects, or dissertations. The document is the result of a collaborative effort among numerous UVic services.

See: <u>https://www.uvic.ca/graduatestudies/resourcesfor/students/thesis/basics/index.php</u>

Thesis templates can be found at the Library website: <u>http://libguides.uvic.ca/uvicspace/etds</u>

Students must plan ahead to arrange for the oral exam meeting. Well in advance of any planned oral exam, contact your department graduate program assistant who will review with you the degree completion steps and your student record to ensure that all courses have been completed.

Thesis submission deadlines involve the student completing some administrative items. Please contact the graduate program assistant who will help students work through the timelines.

12. GRADUATE DIRECTED STUDY (CSC 591) GUIDELINES

CSC 591 includes a presentation. The date of the presentation will be the last day of classes in each term. Once the place and time are fixed, you are required to be physically available to give the presentation. The course instructors should organize among themselves to designate one or more of their own to moderate and evaluate the presentation. The Associate Chair, Graduate could be the designated instructor in cases where no instructor can be found to chair the presentation.

Please add a presentation component to the assessment section on the Pro Forma Course form.

- This presentation component should be for at least 10%. This 10% is for the quality of the student presentation, including how the student interacts with the audience.
- The audience will be engaged in providing constructive feedback to the speakers.
- The audience will consist of the instructor, other CSC 591 students, the instructor or designate. The instructor or designate is responsible for assigning the mark for the presentation component.
- Under extenuating circumstances, special arrangements could be made, where the presentation is video recorded and handed in to the instructor before the scheduled date.
- Other faculty and grad students will also be welcome to attend.

Please add a rationale section to the ProForma form explaining:

- 1. why the directed studies is needed, and
- 2. the relationship of the course to the student's existing thesis work. A few sentences should suffice.

Remarks:

- The proposed directed study should not have significant overlap with the thesis research, as thesis research receives separate academic credit.
- The Associate Chair, Graduate will sign the ProForma after the instructor and thesis supervisor have completed the form.

13. Resources

NetLink and email accounts. When you sign up for a NetLink ID, you will also be issued a UVic email account. Your email address is your <u>NetLinkID@uvic.ca</u> and provide you with 1 GB of storage space.

Check your email account regularly for emails from instructors and important notices.

Your UVic NetLink ID gives you access to many UVic online services and systems. It is your responsibility to protect your account by ensuring you are signed out before leaving your computer. As a student, your NetLink ID account provides you with a secure username and passphrase to consistently and seamlessly access the UVic systems and services for which you are authorized, such as academic records, email, on-campus Wi-Fi, Banner services, learning systems and more. Go to https://www.uvic.ca/uvicid/

Registration. A provisional offer of admission is not sufficient to be eligible to register. Once you receive a full or a conditional offer of admission letter, you can go ahead with registration. To move from provisional to full admission, you must follow-up directly with Graduate Admissions & Records Office to provide any missing official documentation for your application. You can view the checklist on your <u>My</u> <u>UVic application page</u> for a list of received and outstanding documents. Official documents must be mailed or delivered to the Graduate Admissions and Records Office. Students are responsible for the completeness and accuracy of their registrations and for determining the requirements of their program at UVic. See: <u>https://www.uvic.ca/graduatestudies/admissions/registration/index.php</u>

Forms. Graduate student forms are at the Graduate Studies website: See: <u>https://www.uvic.ca/graduatestudies/home/home/forms/index.php</u>

Graduate Students Society (GSS). All graduate students at the University of Victoria are members of the Graduate Students' Society. Membership fees are part of the ancillary fees charged along with your tuition fees. The GSS represents the interest of graduate students and addresses issues in the larger community that concern students. Visit their website for services and information: <u>https://gss.uvic.ca/</u>

International Centre for Students (ICS). This office provides resources and support for international students which begins with pre-arrival services and continues throughout the duration of studies at UVic. See: <u>https://www.uvic.ca/international/home/contact/iss/</u>

Mental Health support. See: <u>https://www.uvic.ca/students/health-wellness/mental-health-services/index.php</u>

Student services, groups and clubs.

See: <u>https://www.uvic.ca/graduatestudies/resourcesfor/students/services/index.php</u> See: <u>https://www.uvic.ca/engineering/computerscience/undergraduate/student-clubs/index.php</u>