Computer Science Ph.D. Qualifying Exam: Preparing a Breadth Statement

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July 12, 2016

This document provides guidelines for the preparation of breadth statements for the Ph.D. qualifying examination.

1 Introduction

The Ph.D. qualifying examination requires that the student must have demonstrated a breadth of knowledge in at least five different topic areas in computer science. A topic area is considered covered if the prospective Ph.D. candidate has credit for a course in that topic area at the third-year level or higher with a certain minimum grade (details may be found on the departmental website).

To satisfy the qualifying exam requirement you must, as soon as possible upon starting your program, provide the graduate chair with a **breadth statement**. This document provides guidelines on how to prepare your breadth statement.

2 Purpose of the Breadth Statement

The purpose of the breadth statement is to inform the graduate committee of what relevant computer science courses you have taken and provide them with enough information for them to decide how many topic areas you have covered according to the criteria for coverage (details may be found on the departmental website).

3 Preparing the Breadth Statement

3.1 What courses do I include?

Include all relevant courses at the third year, fourth year, and graduate levels, that is, courses could be deemed to meet the criteria for coverage. If you have more than five relevant courses that may meet the criteria for coverage, provide information about all of them. However, if you have more than eight such courses, it is likely not necessary to provide information on more than eight courses (though you may if you wish). We suggest you choose up to eight courses most likely to meet the criteria for coverage.

3.2 What information should I provide about each course?

Course # and Name	Institution	Topic Area
CS 603 - Advanced Programming Languages, Grade: 3/4	North Pole U.	Programming Languages
CS 629 - Advanced Rendering Engines, Grade: 3.5/4	North Pole U.	Computer Graphics
CS 379 - Graphical User Interface Design, Grade: 87/100	U. of Alberta	Human-computer Interaction.

Table 1: Example of table showing courses taken by the student and topic areas they are believed to fall under.

Summary List

Provide a summary list in tabular format of each course you have taken and the grade obtained, where it was taken, and which topic area you believe it falls into (see the departmental website for a list of possible topic areas). When specifying grades, be sure to indicate the maximum obtainable grade as well. See Table 1 as an example.

If it seems that one of your courses does not fit into any of the suggested topics on the departmental website, it may still be possible to count the course as one of your 5 topic areas. Just list the topic area as you would define it.

Transcripts

In the event that the courses you list do not appear on any of the transcripts you included in your application package when you applied to the Ph.D. program, or the courses appear, but grades do not (perhaps because you hadn't completed them at the time of application) you must provide transcripts showing proof of grades in the courses listed.

Course Syllabi

For each course listed in the summary, provide the complete course syllabus for the course you took. Attach each course syllabus to your breadth statement.

If the course syllabus is not available, or is not published in English, provide a much detail as possible about the course, most importantly, provide as week-by-week listing of what topics were covered in the course. Provide as much information as possible about coursework – e.g. assignment and/or project tasks.

It is not necessary to provide course syllabi for courses from the University of Sakatchewan.