



UNIVERSITY *of* WASHINGTON | BOTHELL

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COMPUTER SCIENCE & SOFTWARE ENGINEERING

# Master's Writing Skills Requirement

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STUDENT GUIDE

Revised for Spring 2020

## MASTER’S WRITING SKILLS REQUIREMENTS: AN OVERVIEW

The Master of Science in Computer Science and Software Engineering and the Master of Science in Cyber Security Engineering degrees both require scientific writing at an advanced level. For most courses, students are expected to produce written work, including exams, scientific papers, proposals, wiki pages, reports, design documents, and oral presentations.

In addition to these assignments, writing is a major component of both the capstone project and thesis options. Students are required to submit proposals, status reports, and a substantial final project paper or thesis, including abstract and all required sections, and to prepare a quality defense presentation (slide deck).

## MASTER’S WRITING SKILLS COURSES

With these general program writing requirements in view, Computer Science and Cyber Security students may be required to take two courses: CSS SKL 511 and CSS SKL 594.

### CSS SKL 511 “Technical Writing Skills”

**Course Description:** Refer to the online course catalog for the official course description.

This course provides an introduction to the purposes, forms, style, and delivery mechanisms of scientific writing for courses in the Master’s curriculum. In addition, this course hones library research skills and techniques for refining a research topic. While emphasizing skills for current and future assignments, this course also covers the project/thesis proposal and looks forward to the capstone writing project/thesis.

When should I take CSS SKL 511? To provide the greatest benefit in terms of your success in your courses, CSS SKL 511 should be taken at the beginning of the program.

### CSS SKL 594 “Scientific Writing”

**Course Description:** Refer to the online course catalog for the official description.

This course is focused on the capstone project paper or thesis. Its workshop format provides a framework for producing quality documents, section-by-section, through an iterative process of 1) understanding writing goals and formal requirements for each section of the paper, 2) planning and drafting, and 3) revising and polishing based on feedback.

When should I take CSS SKL 594? This course is taken when you are ready to begin writing your Master’s project paper or thesis.

For most students, the best time to take CSS SKL 594 is the quarter before you plan to defend. By this time your proposal will have been approved, and you will have a good idea of your method, including specific tools, and of what constitutes success. Although you will likely not yet have completed your research or have results – and you may even be refining some of the components of your method – you can still begin outlining, planning, and drafting all sections of your scientific paper.

In contrast, taking the course in the same quarter that you plan to defend, i.e., trying to write the paper as you complete your research or project, may mean you get less benefit from the course.

### Course Structure and Homework

Both courses meet weekly, for one 2-hour session. As much as possible, classes are centered on group discussion and group activities, for which students prepare with homework.

CSS SKL 511 homework covers a range of Master's writing and presentation topics; CSS SKL 594 homework is focused on understanding and producing a quality project paper or thesis.

### Grading

Both courses are graded Credit/No Credit. To receive credit, students must complete at least 80% of assigned work and participate in at least 80% of in-class group activities and discussions.

## **MASTER'S WRITING SKILLS ASSESSMENT TEST**

New students take the Writing Skills Assessment Test in their first quarter in the Master's program.

Purpose: The test is designed to provide feedback to individual students about their readiness for the writing requirements of your Master's courses, including capstone work. It is also an opportunity for students to demonstrate their current writing skills – general, technical, and scientific – and, potentially, be waived from the requirement to take CSS SKL 511 and/or CSS SKL 594.

- Students who choose not to take the Master's Writing Skills Assessment Test will automatically be required to successfully complete both CSS SKL 511 and CSS SKL 594, as part of their degree requirements.
- Students who take the Assessment Test and do not meet the required competency level (76%) will be required to complete and pass one or both of the described writing courses. In other words,
  - Students who score greater than 75% on 511-relevant questions are not required to enroll in CSS SKL 511
  - Students who score greater than 75% on 594-relevant questions are not required to enroll in CSS SKL 594

The test is designed to assess student capabilities in a range of skills relevant to the best practices of scientific writing. It is specifically designed to evaluate 3 categories of competencies:

- 1) General writing competencies, including
  - a. Paragraph structure, development, and coherence; topic sentences and transitions
  - b. Sentence structure
  - c. Standard English grammar and punctuation
  - d. Formal tone
  - e. Avoiding gender bias or sexist language, and being inclusive of all cultures
- 2) Technical writing competencies (CSS SKL 511), including
  - a. Organizational patterns (e.g., process, chronological/instructions, compare/contrast)
  - b. Conventions for graphics (figures, including charts, graphs, etc.)

- c. Efficient, objective technical-writing style
  - d. Refining a research topic; understanding the research process
  - e. Knowing correct citation forms and how to use these.
- 3) Scientific writing skills (CSS SKL 594), including
- a. Understanding the purposes, emphases, and forms of the scientific paper, including specific sections (Abstract, Introduction, Results, etc.)
  - b. Paragraph focus, structure, and development in specific sections of the scientific paper
  - c. The ability to coherently and clearly discuss data presented in tabular or graphic form
  - d. Integrating others' work into your writing.

(For a summary of the competencies evaluated, refer to the rubric, which is available on the Master's Program web page).

Test questions are balanced between those that emphasize 511 and 594 competencies, respectively; general writing skills are evaluated for all responses.

#### How is the test scored?

Scoring is holistic, i.e., evaluators consider both content (knowledge) and writing skills, whether general or specific to CSS SKL 511 or 594, in evaluating student responses.

#### When is the test administered?

The test is typically administered in the first or second week of October (test dates vary with the academic calendar, from year to year). At least one week before the test date, students are contacted by the program office to ask whether they plan to take the test; students who opt out are thereby automatically agreeing to enroll in both courses. At this time, details of the test administration, including the test date and time, are provided.

#### Plagiarism

The test is designed to give individual students important information about their readiness for Master's coursework. This readiness is a function of general writing skills and specific technical- and scientific-writing competencies, including the ability to articulate and apply an understanding of purposes, forms, and conventions. Your responses should reflect your own understanding. Accordingly, students may not use outside resources while taking the Assessment Test. Plagiarism, including using outside sources, will result in a score of 0 for the entire test, i.e., the student will need to enroll in both CSS SKL 511 and CSS SKL 594.

#### Assessment Results

Based on assessment score, students may be required to take one or both of the Master's writing skills courses OR

- Students who score above 76% or better on the 511-relevant questions are not required to enroll in CSS SKL 511, and/or
- Students who score 76% or better on the 594-relevant questions are not required to enroll in CSS SKL 594.

The program will notify you of your score in time for you to register for 511 or 594 for the following quarter.

## **FREQUENTLY ASKED QUESTIONS**

### Is it possible for students to prepare before taking the Master's Writing Skills Assessment?

Because technical and scientific writing are skills developed over time, studying over a short period of time (i.e., cramming) is not likely to significantly improve your score. Brushing up on grammar may provide a marginal benefit. Reading about technical/scientific writing and/or the structure of the scientific paper – or better yet, reading scientific papers– may help you on some questions.

### Can students get DRS accommodations for this assessment?

Your experience with the test is important to us. If you have already established accommodations with Disability Resources for Students (DRS), please communication your approved accommodations to the Graduate Program at your earliest convenience, so we can discuss your needs prior to taking the test.

If you have not established services through DRS, but have a temporary health condition or permanent disability that requires accommodations (conditions included, but are not limited to mental health, attention-related, learning, vision, hearing, or other physical or health impacts), please contact DRS at 425-352-5307. DRS offers resources and coordinates accommodations for students with disabilities and/or temporary health conditions. It is the policy and practice of the University of Washington to create inclusive and accessible learning environments for all students, consistent with federal and state law.

### How do students know when to take the assessment?

During student orientation, you will be provided with a schedule of events related to the assessment. Events include deadlines for 1) individual students notifying the program of their intention to take (or not take) the test; for letting the Graduate Program Coordinator know of any DRS accommodations you require; 3) announcement of test administration protocols; and notification of student scores.

### Can students take the Master's writing skills courses even if they score above 75% on the assessment?

Yes. Because the specific forms and conventions of scientific writing may be unfamiliar, most students, regardless of their general writing skills, will benefit from taking 511 and 594.

### Are scores the only determining factor in the decision to take the Master's writing skills courses?

No. In some cases, regardless of assessment scores, your faculty advisor or another faculty member, may ask you to take one or both courses. For example, if your project or thesis advisor believes you would either a) benefit from the course or b) have difficulty completing the writing portion of the capstone project or thesis, they may recommend that you take 594. Finally, you

may decide that you would benefit from the content or the structure of either of these writing courses.