1. **Overview:** To fulfill the writing competency requirement in computer science, a student needs to find a well defined topic in computer science, study the related subjects, write a paper under the supervision of the faculty, submit the paper for evaluation, and have the paper approved by the faculty. In the following, we describe in details the guidelines of this entire process.

2. **When to start:** The student should start the process of preparing and writing the paper in his/her junior year. In other words, it should begin at least three semesters before the time to graduate. This is necessary since the student needs to spend at least one semester studying the related subjects, may need another semester to write the paper based on the study, and then submit the paper to the department for evaluation no later than one semester before graduation.

3. **Proposal and approval of the topic:** The first step of the process is to identify a topic that is relevant to computer science and that the student feels interested in doing an in-depth study. During his/her junior year, the student should seek a topic under of the context of an upper-division computer science course he/she takes, and consult the instructor of the course to tailor the direction and the range of the study to cover the topic. The student should write down a proposal describing the study plan of the topic and the outlines of the resulting paper, and have this proposal approved and signed by the instructor. (See the sample proposal format attached in the end of this document.) The student should then submit a copy of the proposal to the department and have it registered and kept by the department secretary. This faculty approval and the submission of the initial plan should be done no later than two semesters before graduation.

4. **Study of the topic:** After the faculty approval of the study plan and the paper outline, the student should proceed to finish the study and write a paper based on the study. The student may take an optional one-unit CSCI480 Research Seminar under the supervision of a faculty to conduct the study of the topic for one semester.

5. **Format and style of the paper:** The student should complete the paper based on the proposal approved by the faculty (see guideline #3) and the study he/she has done.

   - The paper should have a title, an abstract of its contents, a section of introduction to the main subject of the paper and the approach of the study, followed by the main technical sections to explore the subject, a section of conclusions on the findings through the study, and ended with references cited in the paper.
   - The paper should have at least eight pages in its contents, double spaced between lines, using Times New Romans 12-point font or its compatible fonts.
   - A paper written like a manual of computer systems is not acceptable. The paper should be written as a regular article with all technical terms and
acronyms well defined before they are used in paper. The contents of the paper must coherently describe the topic, the study, and the findings.

6. **Rules of integrity:** The paper should be the brainchild of the student’s study written in sentences from the student’s own thoughts to convey to the reader what the student has learned from the study. Plagiarizing contents from books and articles will end in discipline actions including the total rejection of the paper.

7. **Submitting the paper:** The student should submit the paper to the department for evaluation no later than one semester before graduation. The paper submitted should be registered by the department secretary first, and then evaluated anonymously by two faculties. When submitting the paper, the student should add a cover page with the student ID instead of the student’s name, and indicates on the cover submitted to fulfill the writing competency requirement plus the date of submission.

8. **Evaluation of the paper:** The quality of the paper will be evaluated based both on the extent of study and its effectiveness of conveying the context and the goal and the findings of the study to the readers. The paper will be approved as a fulfillment of the writing competency requirement in computer science if and only if it receives at least 3 points of out of a 5-point scale from both faculties evaluating the paper. If the paper only fails to meet the criteria with some minor flaws, the student may be given a chance to revise the paper further and resubmit the paper again. A seriously flawed paper (see guideline #6) may be totally rejected and the student may need to do the study again and write the paper from scratch.