

Dublin City University
School of Computing
CA640: Research Skills
Assessment Details

Research Skills forms 33.3% of the complete module.

Assessment of Research Skills will comprise the following components:

- **Written Assignment: 60%**
 - MSc in Software Engineering (MSE) : A critical precis of a research paper taken from the *Proceedings of the 32nd International Conference on Software Engineering (ICSE) 2010*
 - MSc in Security and Forensic Computing (MSSF): A critical precis of a research paper taken from the *Proceedings of the 16th ACM Conference on Computers and Communications Security (CSS) 2009*
 - MSc in Bioinformatics (MBIO): The MBIO assignment will be based on a preliminary literature review for research project.
 - Submission Date: Thurs 2nd December 2010 before 5.00.
 - Your article should be submitted in the appropriate box in L1.14

- **Oral Presentation: 40%:** A short oral presentation of your precis/literature review.

Written Assignment

- **Literature Review (MBIO):** Further details of the literature review will be provided when you have been assigned a research project.
- **Precis (MSE and MSSF):** For this assignment you are required to write a critical precis of one of the FULL research papers from the *Proceedings of the 32nd International Conference on Software Engineering (ICSE) 2010* or *Proceedings of the 16th Conference on Computers and Communication Security (CCS) 2009*. These conferences are the leading and international research conferences in the areas. Acceptance of paper submissions is highly competitive, and papers which appear in the conference proceedings are among the leading research contributions. The full proceedings of ICSE and CCS can be accessed online from the ACM Digital Library using computers registered on the DCU campus at <http://portal.acm.org/dl.cfm> following the link to “Proceedings”, then the link to “ICSE” or “CCS”.

For this assignment you should look through the list of FULL research papers (typically 8 pages) which appear under a range of topical sections in the proceedings. Choose one paper from the proceedings that you find the most interesting. You should then study this paper in detail. From your reading you should aim to ensure that you understand the background and context of the work described in the paper, clearly identify the exact topic and/or hypotheses explored in the paper, the methods used for this work, and the conclusions of the described research. In order to properly understand the paper you may find that you need to read other papers that are referenced; many of these will be available online or in the library. If you cannot obtain a specific research paper, or

if there is a topic within the paper that you do not understand, then you should locate additional materials, e.g. from another research paper or a textbook, which explain these points; web search engines are very useful in looking for material associated with a topic that you want to learn about, you should experiment with selecting keywords for the topic until you find some useful information.

In studying the paper you should bear in mind the material on literature review from the CA640 lectures. When reading the paper try to analyse: the way in which the paper is structured, including how the ideas are developed; the decisions of the writer on what material to include or exclude, which material is covered in email, which mentioned only briefly and which referred to as references to yet other papers; and the style of language and choice of vocabulary. You should also find it useful to study these features of other papers from the conference proceedings; in general you should find that you do not need to study the technical details of a paper to appreciate its structure and its presentation style. Try to use the lessons you learn from studying these papers in preparing your own report: to help you for example to develop your judgment over what material from the paper you have reviewed to include in your report, when to make reference to other papers, and what to leave out altogether.

Format of Submission

Your precis should follow the general structure of a research paper, and be written in an appropriate style. In effect your article should be a summarised version of the original paper incorporating critical observations of its strengths and weaknesses. Your article should include the following sections:

- You should include the following disclaimer at the top of the first page of your paper:

Disclaimer: Submitted to Dublin City University, School of Computing for module *CA640: Research Skills, 2009*. I hereby certify that the work presented and the material contained herein is my own except where explicitly stated references to other material are made.

- Title, giving details of the title of the paper you have studied, its author(s), and the publication details.
- Your name, email address, and student ID number.
- A short (150 word maximum) **Abstract** of your article. The Abstract should overview the topic, context of the work, and key points of the paper(s) reviewed. It should be possible for someone familiar with issues and topics in Software Engineering to read and understand this Abstract without needing to look at the main part of your report. The Abstract should thus stand as a separate piece of writing which makes sense independent of the main article.
- The main body of your submission should be clearly structured with subsections. The article should adopt the following general structure, although the exact sections/subsections and structure will vary depending on the paper you study. You should exercise your own judgment in deciding the exact structure and sectioning of the report:
 - * **Introduction:** An introductory section outlining the background to the subject addressed and identifying its specific contribution to the field. This section should end with a very short preview of the structure of the rest of your article.
 - * **Main Review:** A brief review of existing work in the specific area of the paper, and details of the specific work described in the paper.
 - * **Conclusion:** A short concluding section summarising the material covered in your article.
- **References:** A list of references used in your article giving **full** publication details - author(s), title, year of publication, conference or journal, volume number of journal or conference proceedings, page numbers, geographical venue of conference.

Publications should be listed either in alphabetic order of (first) author or in order of your (first) citation in your article.

This list should include reference to papers, reports and web sites etc cited in the original paper to which you have made reference to on your precis of the paper, papers which give details of material in the original paper which you do not have space to refer to in your article but have chosen to cite, and additional sources which you may have consulted in preparing your article.

Your report should be no longer than 2000 words, including the abstract, but excluding the reference list.

Oral Presentation

This should be based on the material covered in your precis/literature review. You should decide which material to include, and how to present it (white board, slides, powerpoint etc). Remember you will not be able to cover all the material from your article in the time available for your presentation.

- You will have a total of 10 minutes for your presentation, followed by 5 minutes for questions from the audience.
- Exactly how you use the time is up to you, but it is suggested you take about 1 minute to introduce the topic, 8 minutes to cover the main detail, and 1 minute to conclude. Do not waste your presentation time obsessively looking at your watch !
- There will be a data projector and PC available, as well as an overhead projector and a whiteboard.

It is expected that the presentations will take place in week 11 or 12 of Semester 1: details of times and locations will be made available in due course.