

Student Name: _____

Assessor Name(s): _____

Element	Grade	Brief explanation for the assigned grade
Depths and breadth of understanding and originality	/30	
Quality and Clarity of writing	/20	
Synthesis of literature	/10	
Introduction	/10	
Presentation	/10	
Defence	/10	
Mid-year Evaluation	/10	
Total	/100	

The bullet points indicate the standards for the highest grade.

Whenever the word “appropriate” is used, it refers to the publication standards of the sub-discipline (e.g. for research papers or books).

Depths and breadth of understanding and originality (30)

To obtain a good mark in this category it is not necessary to have a publishable thesis, though this will certainly be looked at favourably. Writing the details of a dense and complex proof could, for example, originality. The following issues will be considered:

- The author has done a superb job understanding the intricacies of a deep subject.
- The mathematics in the thesis is correct and there are no loose ends. This could mean, in particular:
 - If a result requires a proof, a correct and precise proof is written, or a precise reference is provided.
 - If a model is derived or explained an appropriate level of justification is provided.
 - The computations or the algorithms have been rigorously checked.
- All the material in the thesis ties together to give a coherent picture of the problem at hand.

Quality of writing (20)

- The progression of the material is logical.
- The information is correct and is explained very well.
- The material has been appropriately broken into several chapters, sections, and subsections in an organised way. Each chapter and section has its own introduction, setting the stage for what comes next.
- There are very few mathematical, or grammatical mistakes. Moreover, equations are included appropriately in the text.
- Notation is clear and consistent.
- The writing is very tight, e.g., there are no redundant sentences.
- The document is focused on what is important.
- The difficulty and importance of the individual components of material is reflected in the weight it is given in the thesis.

Synthesis of literature (10)

- The author has had to draw from several research papers and books to put together the document.
- The author has developed a fundamental understanding of the subject, going beyond simply paraphrasing statements from other sources.
- The thesis will be useful for other students trying to learn the subject.

Introduction (10)

- The beginning of the introduction is accessible to a wide range of mathematicians.
- The history and importance of the topic has been appropriately addressed.
- The introduction efficiently summarises progress in the field and clearly states what was done before, and what is done in this thesis.
- The introduction lays down how different approaches undertaken in the thesis or in the literature relate to each other.

Presentation (10)

- The talk is well planned.
- The presentation is clear and audible.
- The slides or handwriting is legible.
- The presentation is aimed at a wide range of students and academics.

- The material is well organised and flows well.
- The mathematics is presented clearly and questions are addressed appropriately.

Defence (10)

- For the thesis defence, the student has prepared a short (e.g. 3-4 minutes) thesis presentation.
- The student demonstrates an excellent level of understanding through addressing questions and concerns of the committee members.

Mid-Year Evaluation (10)

The student is to hand in one chapter or section of the thesis to the supervisor and the second reader by the Wednesday of the second week of the second semester. This section may or may not include a literature review. It should include significant mathematical content, for example, derivation or proof of a significant result, explanation of an important component of a model, or preliminary code/numerical results. It does not need to contain everything in the thesis that will ultimately come before it.

The assessors (that is the supervisor and the second reader) assign a grade of 10 based on the following criteria:

- Level of understanding and originality.
- Quality of writing.
- Synthesis of references.
- Ten minutes presentation for the supervisor(s).

The format of the presentation is up to the assessors. The supervisor is to send the results of the mid-year evaluation to the Honours Coordinator by the end of the second week.

The expected elements of the honours project (thesis components, talk and defence), and the criteria for a high mark are stated above. These provide a guide to what students should aim for. It is unlikely that any thesis (or talk) would obtain perfect marks in their relevant elements, even if they were very well written (or presented). The criteria for assigning a mark, with reference to the guidelines for each element, are as follows.

Mark range

- 85%-100%: Covers each of the criteria for the element, with just minor and/or occasional improvements needed.
- 75%-84%: Addresses the criteria for the element, but improvements would be required to achieve the stated aims.
- 65%-74%: Addresses the criteria for the element, but significant improvements would be required to achieve the stated aims.
- 50%-64%: Addresses the criteria for the element, but major improvements would be required to achieve its stated aims.
- 45%-49%: Demonstrates superficial understanding; occasional inappropriate or unsupported arguments associated with addressing the element.
- 20%-44%: Demonstrates clear deficiencies in understanding and communication and/or lack of care.
- 1%-19%: Fails to demonstrate most or all of the basic requirements of the element.