Appendix 1: Marking criteria

Posters: assessment criteria

Class	%	Criteria
1st	100	Poster does a masterful job of communicating the most important scientific information. It presents the information in an **eye-catching and visually attractive** way. The material **is laid out cleanly, logically and accessibly**. **Images (where present) are of high quality**. Presentation is **concise** and **flawless**. The content of the poster has been **superbly researched** and **correctly referenced**. The presenter(s) of the poster showed **command of the relevant concepts and facts** when explaining the poster and/or answering questions.
	95	
	90	
	85	Excellent poster, meeting all the criteria for a mark of 68 and **most but not all of the criteria for a mark of 90+.**
	80	
	76	Excellent poster, meeting all the criteria for a mark of 68 as well as **one or a few of the criteria for a mark of 90+**.
	72	
2A	68	Very good poster that is **attractive and laid out in a largely logical fashion**, very effectively communicating the significance of a body of scientific information. Posters in this range would generally be expected to show: **appropriate background reading**, **some critical, analytical or synthetic treatment of the information**, **no evidence of significant errors of understanding** in the poster or when answering questions, material presented **concisely**, and **appropriate use of sources**.
	65	
	62	
2B	58	Good poster conveying information adequately, but marred by omissions or errors, or is laid out in a way that significantly detracts from the content of the poster (*e.g.* misplaced emphasis). Nonetheless, the poster and/or its presenter(s) **demonstrate understanding of most of the relevant expected material**.
	55	
	52	
3rd	48	Acceptable poster. Marred by major errors, brevity, irrelevance or poor design (as laid out below); however, the poster and/or its presenter(s) **demonstrate understanding of at least a third of the expected relevant material**.
	45	
	42	
Fail	38	Poster demonstrates understanding of **less than a third of the expected relevant material**, and is marred by major errors, brevity, or inappropriate design. The presenter(s) did not answer questions well enough to convincingly demonstrate adequate knowledge and understanding.
	35	
	30	
	25	Poster demonstrates understanding of **less than a quarter of the expected relevant material**, whether through omission of material, poor execution (e.g., unlabelled figures) or errors. Typically the poster will show many of the following failings: inadequate graphics, illegibility, overcrowding, large gaps, missing abstract/summary, lack of attention to detail, lack of material.
	20	
	15	Poster is so poor as to indicate its presenter(s) did not understand what a poster is supposed to achieve. Conveys **much less than a quarter of the expected relevant material**.
	10	
	5	
	0	Poster not produced.

Analytical = breaking a concept down into its parts and examining their inter-relationships, e.g. comparing and contrasting two models. **Critical** = judging a hypothesis or conclusion by examining the validity of the evidence presented for it, e.g. evaluating two competing models. **Synthetic** = integrating concepts from several sources. e.g. discussing relevant outside reading, or combining material across several lectures or courses into a coherent or original whole. **Comprehension** = understanding of the meaning of information, e.g. explaining how one concept follows logically from another. **Application** = use of knowledge outside of the situation in which it was learnt, e.g. applying a model to a novel situation, or carrying out an appropriate manipulation of a data set.

Presentations: assessment criteria

Class	%	Criteria
1st	100 95 90	Presentation does a masterful job of communicating a substantial body of scientific information concisely and flawlessly. The presenter **held the audience's attention**, showed complete **command of the relevant concepts and facts**, **spoke authoritatively**, showed **evidence of substantial outside reading** (where appropriate), provided a **consistently analytical, critical and/or synthetic treatment** of the information (where relevant), gave **superb answers to questions**, and showed **fluency in the use of any teaching aids** (PowerPoint, demonstrations, handouts, PRS clickers, *etc*). Any **visual aids were conference-level**.
	85 80	Presentation does an excellent job of communicating a substantial body of scientific information. It meets all criteria for a mark of 68, as well as meeting **most but not all of the criteria for a mark of 90+**.
	76 72	Presentation does an excellent job of communicating a substantial body of scientific information. It meets all the criteria for a mark of 68 as well as meeting **one or a few of the qualities of a 90+ presentation**.
2A	68 65 62	Very good presentation effectively communicating a significant body of scientific information, being a **logically-structured exposition** enabling the audience to appreciate the significance of the material presented. Presentations in this range would generally be expected to show the following characteristics: **appropriate background reading**, **good critical, analytical or synthetic treatment of the information**, **no evidence of significant errors of understanding** during the talk or in answers to questions, **used resources well**, **spoke without detailed notes**, **little or no hesitation**, **kept more or less to time, appropriately paced (neither too fast nor too slow).** Material is presented **concisely** and with **appropriate use of sources**.
2B	58 55 52	Good presentation successfully communicating a significant body of scientific information. It is a **largely accurate account of most of the expected relevant material**, showing evidence of **some background reading** and **adequate preparation**, but is marred by several of the following: confused sections, poor use of resources, over-run, omissions, errors, hesitation, irrelevance (*e.g.* slides that do not add value), over-reliance on non-primary sources, by reading from notes.
3rd	48 45 42	Acceptable presentation achieving only limited communication of scientific information and with major errors or omissions. Presenter delivers a **mainly accurate account of at least a third of the expected relevant material**, showing a generally weak understanding and evidence of little background reading or preparation.
Fail	38 35 30	Presentation fails to communicate any significant scientific information. Presenter demonstrates **understanding of less than a third of the expected relevant material** (either through errors, through lack of preparation, or by omission).
	25 20	Presentation fails to communicate scientific information and is on balance misleading. It shows **understanding of less than a quarter of the expected relevant material**, but is so inaccurate and/or irrelevant that it succeeds only in misinforming and confusing the audience.
	15 10 5	Presentation includes very little that is correct and relevant.
	0	Presentation not given.

Supplementary material includes **outside reading** and material from other courses. For first- and second-year students, textbooks are an acceptable source of outside reading; for final-year students, outside reading should normally come from journal articles or other peer-reviewed publications. **Analytical** = breaking a concept down into its parts and examining their inter-relationships, e.g. comparing and contrasting two models. **Critical** = judging a hypothesis or conclusion by examining the validity of the evidence presented for it, e.g. evaluating two competing models. **Synthetic** = integrating concepts from several sources. e.g. discussing relevant outside reading, or combining material across several lectures or courses into a coherent or original whole. **Comprehension** = understanding of the meaning of information, e.g. explaining how one concept follows logically from another. **Application** = use of knowledge outside of the situation in which it was learnt, e.g. applying a model to a novel situation, or carrying out an appropriate manipulation of a data set.

Research Project theses: assessment criteria

Class	%	Criteria
1st	100	**Exceptional**. Work is of a publishable standard**. It is an exceptionally well-presented exposition of the subject, showing: (i) command of the relevant concepts and facts, (ii) a high critical or analytical ability***, (iii) originality in thought, approach and/or and experimental or modelling design, and (iv) mastery of the relevant literature.
	95	
	90	
	85	
	80	**Excellent**. Thesis is written to a publishable standard** with minor revision. It is a very well presented exposition of the project, showing most of the above features, but falling short in one of them.
	76	
	72	
Merit	68	**Very Good to Good**. Thesis contains potentially publishable material**, but needs revision of the text and further research. It is otherwise a well presented exposition of the project, showing: (i) a clear grasp of the relevant concepts and facts, (ii) appropriate, though not highly sophisticated analysis or evaluation, and (iii) a sound knowledge of the relevant literature.
	65	
	62	
Pass	58	**Adequate**. Thesis is not written to a publishable standard and requires major revision and substantially more research. It is an adequately presented exposition of the project, showing: (i) a grasp of the basic concepts and facts, (ii) an adequate use of statistics in its analyses and/or approaches of evaluation, and (iii) sufficient knowledge of the relevant literature to set its results in a scientific context.
	55	
	52	
Fail	48	**Unsatisfactory**. Thesis is an incomplete presentation of the project and is marred by major errors or gaps, missing analysis, lack of references, misconceptions, or excessive brevity, at most showing a weak grasp of the basic concepts and facts.
	45	
	42	
	38	Thesis as above, but presentation extremely poor and overall impression indicates a very weak grasp of the basic concepts and facts.
	35	
	30	
	25	
	20	Thesis as above, and in addition no real attempt to analyse data or present results in a scientific manner.
	15	
	10	
	5	Thesis as above but incomplete and lacking understanding in all areas.
	0	Thesis contains **nothing** relevant or was not submitted.

** This publishability assumes that the data or theory is per se worth publishing. *** **Analytical** = assessing a hypothesis or statement by breaking it down into its elements and examining their inter-relationships and contribution to the whole with quantitative methods where possible or necessary; cf. **Critical** = judging a hypothesis or conclusion by examining the validity of the evidence adduced for it.