THIRD YEAR AND MSCI PROJECT DISSERTATIONS - MARKING GUIDELINES - 3

Table 1. Set of minimum criteria per mark band for **Applied Mathematics & Statistics** projects.

Mark range	Third Year	MSci
<40	Failed	Failed
40-50	Bare pass. The student shows very weak understanding of the project. Bad exposition. Some work has been done nonetheless.	Failed
50-60	Decent exposition. Some work, typically computational. Still weak understanding of the problem.	Decent exposition. Some numerics/data analysis performed, but naive interpretation overall and weak understanding of the problem addressed. Still the student manages to produce something reasonable.
60-70	Shows signs of a decent understanding of the problem. Some background theory, some numerical analysis. Decent exposition	Good exposition. Some background theory reported correctly. The student shows a decent understanding of the problem he's addressing. Decent computational results (numerical simulations, data analysis).
70-80	Good exposition and good mix of background theory with numerical analysis.	Good exposition, good background theory. The student shows clear signs of fully understanding the problem he's addressing, including the bigger picture. There is good computational work (numerical simulations, data analysis) which also includes new analysis (not necessarily replications of previous, published work).
80-90	Like 70-80 but now in addition the student has produced new results (typically computational).	Fulfills criteria for 70-80 but on top of that, the main focus of the project in on novel material (typically computational work) which is non-trivial, might be publishable after some additional work. Very good exposition and good background theory. The student fully understands the problem and the bigger picture. New results might be not publishable, but in that case the computational work is thorough and the topic is hard (i.e. requires a good deal of work).
>90	Very good exposition, an excellent balance of background theory and computational results. This work would be publishable if extended ap- propriately.	Excellent exposition, excellent background theory, new results that constitute publishable material after few, minor corrections.

4 THIRD YEAR AND MSCI PROJECT DISSERTATIONS - MARKING GUIDELINES -

Table 2. Set of minimum criteria per mark band for **Pure** projects.

Mark range	Third Year	MSci
<40	Failed	Failed
40-50	Bare pass. The student shows very	Failed
	weak understanding of the project.	
	Bad exposition. Some work has	
	been done nonetheless.	
50-60	Decent exposition. Some work, typ-	Decent exposition. Some
	ically regurgitating results. Still	proofs/technical definitions given
	weak understanding of the problem.	but in a way which suggests the
		have not been understood. Wea
		understanding of the problem ad
		dressed. Still the student manage
		to produce something reasonable.
60-70	Shows signs of a decent understand-	Good exposition. Some background
00 10	ing of the problem. Some back-	theory correctly used to motivat
	ground theory, some coherent defini-	the work. The student shows
		decent understanding of the prob
	tions and proofs and evidence that	_
	student appreciates the overall ob-	lem he's addressing. Decent logical
	jectives. Decent exposition	progression from definitions through
		proofs and corollaries to desired re
		sults (making it explicit where omis
		sions/assumptions have been mad
		as material falls outside scope of
		work).
70-80	Good exposition - proofs and defini-	Good exposition, good knowledge of
	tions not only coherent but demon-	field. The student shows clear sign
	strating insight and intuition. Sig-	of fully understanding the problem
	nificance of work explained and re-	he's addressing, including the big
	lated to other progress in the field.	ger picture. This is demonstrate
		by analogies, intuitions and opinion
		that have come from the student
		There is a clear logical progressio
		through the report, and the proof
		are not only coherent, but it is clea
		that the student has taken owner
		ship of them and explained them i
		their own terms.
80-90	Like 70-80 but now in addition	Fulfils criteria for 70-80 but on to
	the student has produced new re-	of that, the main focus of the project
	sults (typically worked examples il-	in on novel material which is nor
	lustrating results, or alternatively	trivial, and might be publishab
	corollaries which the student has	after some additional work. Ver
	identified as of interest).	good exposition and good back
		ground theory. The student full
		understands the problem and the
		bigger picture. Student's new re
		sults need not be publishable, but
		the proofs are thorough, the impl
		cations (and unresolved issues) and the taria
		thought through and the topic
		hard (i.e. requires a good deal of
		work).
>90	Very good exposition, non-trivial	Excellent exposition, excellent back
	new results proved. This work	ground theory, new results that cor
	would be publishable if extended ap-	stitute publishable material after
	propriately.	few, minor corrections.