

## AK1271 Bachelor of Mathematical Sciences PAPER SELECTION FORM 2011

<b>Family Name :</b>	<b>First Name:</b>	<b>ID no.:</b>
<b>Full Time</b> <input type="checkbox"/>	<b>International</b> <input type="checkbox"/>	<b>Domestic</b> <input type="checkbox"/>
<b>Major:</b> (Please indicate by ticking in the appropriate box which major you are <b>intending</b> to study)		
<input type="checkbox"/> <b>Analytics</b>	<input type="checkbox"/> <b>Applied Mathematics</b>	<input type="checkbox"/> <b>Astronomy</b> <input type="checkbox"/> <b>Computer Science</b>

### Option A: Complete your enrolment online

Go to Arion (<http://arion.aut.ac.nz>) and enter your username and password.

**Please contact Student IT Helpdesk on 921 9999 ext.9953 if you do not know your Arion login details**

Go to **enrolments** menu and select **Class Enrolments**

Once you have selected your enrolments, please click on **Confirm Enrolments** to complete your selection.

### Option B: Complete, Sign and Return this form

Ensure your lectures and laboratories do not clash and you have met the prerequisite requirements

Sign and Date this paper selection form, and return it to:

Programme Administrator (Bachelor of Mathematical Sciences)

School of Computing & Mathematical Sciences

AUT University

Private Bag 92006

Auckland

**\*Your confirmed timetable will be available on Arion once your enrolment is processed. Please check Arion regularly for your updated timetable.**

### Core Papers (*must be completed*)

	Code	Paper Name	Pre-requisites	Level/Points	Tick
Sem1	145612	Applied Communication		5 / 15	
	717900	Research Project	145612 and 210points	7 / 30	
Sem2	145612	Applied Communication		5 / 15	
	717900	Research Project	145612 and 210points	7 / 30	

### Common Papers (*Must complete at least 75 points from the papers in the table below*)

	Code	Paper Name	Pre-requisites	Level/Points	Tick
Semester 1	715184	Statistical Models 5		5 / 15	
	735318	Programming for Engineering Applications		5 / 15	
	715187	Computer Organisation		5 / 15	
	715186	Differential & Integral Calculus		5 / 15	
	715204	Introductory Astronomy		5 / 15	
Semester 2	715184	Statistical Models 5		5 / 15	
	715202	Physics 1		5 / 15	
	715189	Algebra & Discrete Mathematics		5 / 15	
	735320	Object Oriented Programming	735318	5 / 15	
	715700	Probability Theory & Applications		5 / 15	

**Analytics Major (Must complete 240 points including 60 points level 6 and 45 points level 7 from below)**

Semester 1	716284	Forecasting	715184	6 / 15	
	716281	Operations Research	715700	6 / 15	
	717701	Industrial and Business Analytics	716184	7 / 15	
Semester 2	406703	Logical Database Design	735318	6 / 15	
	716700	Statistical Modelling for Analytics	715186, 715700	6 / 15	
	716184	Statistical Methods	715184	6 / 15	
	717292	Random Systems	715700, 716284	7 / 15	
	407916	Data Mining and Knowledge Engineering	406703	7 / 15	
<b>Elective papers (please complete the elective papers section)</b>					
Business Economics : 376305, 376307, 377402, 377409					
Marketing : 486662, 48663, 487965, 487968, 487972					

**Applied Mathematics Major (Must complete 240 points including 60 points level 6 & 45 points level 7 from below)**

Semester 1	716186	Multivariate Calculus	715186	6 / 15	
	716101	Linear Algebra	715189	6 / 15	
	717200	Partial Differential Equations	716186, 716187	7 / 15	
	717285	Mathematical Modelling in Finance	716101, 716285	7 / 15	
Semester 2	716100	Computational Mathematics	716101, 716186	6 / 15	
	716285	Mathematics of Finance	715186, 715700	6 / 15	
	716187	Differential Equations	715189, 716186	6 / 15	
	717100	Industrial Mathematics	716101, 716186, 716187	7 / 15	
	717101	Numerical Methods	716100, 716187, 735318	7 / 15	
<b>Elective papers (please complete the elective paper selection section)</b>					
Business Finance : 395001, 396002, 396003, 397003					
Engineering Science : 766023, 766030, 737003, 767024					

**Astronomy Major (Must complete 240 points including 60 points level 6 and 45 points level 7 from below)**

Sem 1	716201	Computational Spherical Astronomy	715186, 715204	6 / 15	
	716202	Physics 2	715186, 715202	6 / 15	
	717210	Practical Astrophysics	716210	7 / 15	
Sem 2	716210	Astrophysics	715204, 716201, 716202	6 / 15	
	717230	Frontiers of Astronomy	716210	7 / 15	
	717220	Radio Astronomy	716186, 716210	7 / 15	
<b>Elective papers (please complete the elective paper selection section)</b>					
130 points from and other paper approved by the Programme Leader					

**Computer Science Major (Must complete 240 points including 60 points level 6 and 45 points level 7 from below)**

Semester 1	716180	Data Structures & Algorithms	715189, 735320	6 / 15	
	736310	Computer Architecture	715187, 735320	6 / 15	
	717287	Distributed & Mobile Systems	716181	7 / 15	
	717310	Game & Entertainment Systems	716288, 716181	7 / 15	
	717300	Theory of Computation	715700, 716181	7 / 15	
Semester 2	716288	Computer Graphics	715189, 735320	6 / 15	
	716181	Algorithm Design & Analysis	716180	6 / 15	
	717286	Highly Secure Systems	716181	7 / 15	
	406707	Operating Systems	716180, 736310	6 / 15	
<b>Elective papers (please complete the elective paper selection section)</b>					
Game Development : 116404, 116405, 116408, 117405					
Networking : 735316, 736381, 736392, 407706					

## Elective Paper Selection

Electives	Code	Paper Name	Pre-requisites	Level/Points	Tick
	116404	Visual Effects		6 / 15	
	116405	Animation		6 / 15	
	116408	Interactive Design & Game Development		6 / 15	
	117405	Animation Studies	116405	7 / 15	
	376305	Business & Macroeconomic Environment	715184	6 / 15	
	376307	Research Applications for Business		6 / 15	
	377402	Managerial Economics & Organisations		7 / 15	
	377409	Economics of Firm & Consumers Behavior		7 / 15	
	395001	Fundamentals of Finance		5 / 15	
	396002	Corporate Finance	395001	6 / 15	
	396003	Investment and Portfolio Analysis	395001	6 / 15	
	397003	Financial Risk Management	396002 or 396003	7 / 15	
	407706	Protocol Analysis and Design		7 / 15	
	486662	Marketing Research		6 / 15	
	486663	Marketing Management		6 / 15	
	487965	Strategic Brand Management	486663	7 / 15	
	487968	Sales Management	486663	7 / 15	
	487972	Customer Relationship Management	486663	7 / 15	
	717310	Game and Entertainment Systems	716181, 716288	7 / 15	
735316	<i>Computer Network Principles</i>		5 / 15		
736381	<i>Communications Networks</i>		6 / 15		
736392	<i>Computer Network Applications</i>		6 / 15		
737003	Fields and Waves	715186	7 / 15		
766023	Solid Mechanics	715202	6 / 15		
766030	Dynamics		6 / 15		
767024	Thermofluids 1	715202	7 / 15		

**Office Use Only:**

**Approved by :**

**Date:**