Higher degrees and honours bachelor degrees in mathematics and statistics completed in Australia in 2014

Peter Johnston*

This report presents data relating to students who completed Honours or Higher Degrees in Mathematics during 2014. The data are part of an on-going project for the Australian Mathematical Society and should be read in conjunction with previous reports [1]–[15] covering the period 1993–2013.

This year represents the fourth occasion that data has been reported for two-year coursework masters degrees with classifications (similar to existing Honours degrees). The University of Melbourne is the only university to offer such degrees in place of the traditional Honours degree, although some other universities are expected to follow this model. In the discussions that follow, these data have been merged together and will be referred to simply as 'Honours', although the completions for the two degrees are presented in separate tables. As time goes on, and more universities offer coursework masters degrees of this type, the two data sets will be differentiated and displayed as separated entities (backdated to 2010).

Appendix 1 presents data for students completing Honours degrees in 2014, at all Universities in Australia. Within each institution, the data are broken down into male and female students and into the three traditional areas of Mathematics: Pure; Applied and Statistics. There is also the general category 'Mathematics' for institutions that do not differentiate between the conventional areas. Finally, there is an 'Other' category for newer areas of mathematics such as Financial Mathematics. Each category is further broken down into grades of Honours awarded. Appendix 2 presents the coursework masters degrees awarded by the University of Melbourne in 2014. Appendices 1 and 2 combined show that in 2014 there were 186 Honours completions in Australia, with 139 (75%) receiving First Class Honours (compared with 119 out of 173 (69%) in 2013 and 113 out of 176 (64%) in 2012). Over recent years the average fraction of First Class degrees awarded has been about 70%.

Figure 1 presents the total number of students completing Honours degrees in Mathematics, including two-year Coursework Masters degrees (with classifications) over the period 1959–2014. It shows that in 2014 the number of Honours completions continues on an upward trend (with only a slight dip last year). The figure also shows the numbers of male and female students who completed Honours over the same time period. For last year, the number of male students has again increased over the previous years with 141 completions (140 in 2013 and 130 in 2012),

*School of Natural Sciences, Griffith University, Nathan, QLD, 4111.
Email: P.Johnston@griffith.edu.au

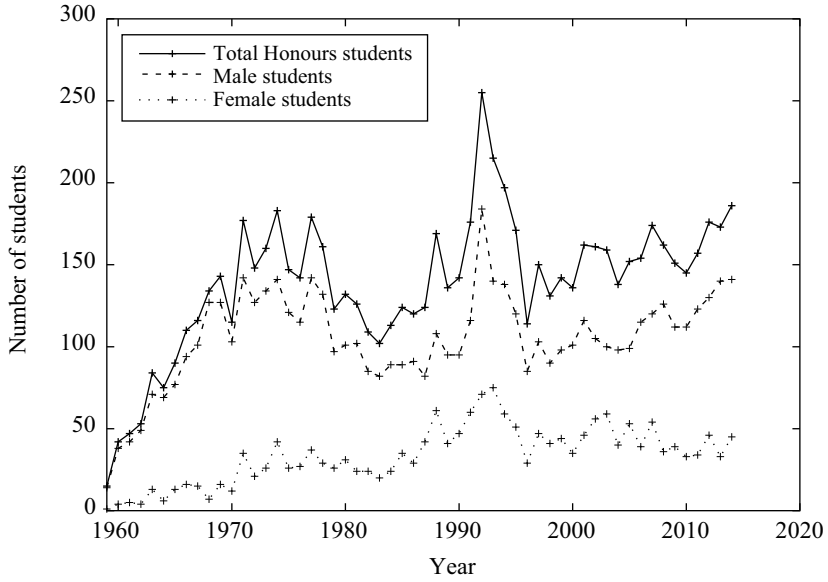

Figure 1. Number of Honours degrees, including two-year coursework masters degrees (with classifications), completed in mathematics and statistics, 1959–2014.

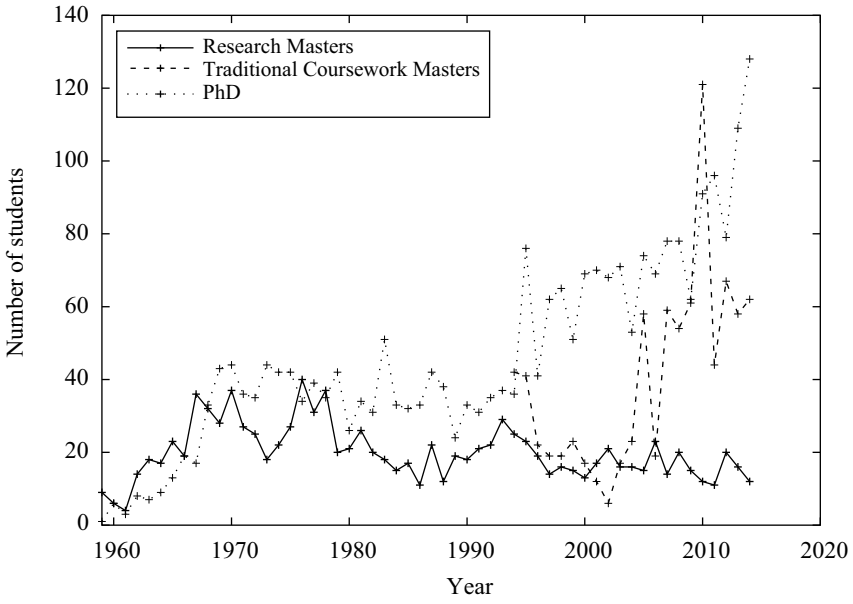

Figure 2. Number of research higher degrees completed in mathematics and statistics, 1959–2014.

while the number of female students increased to 45 (compared to 33 in 2013) back to the level of 2012 (46).

Appendix 3 presents the data for Higher Degree completions in 2014. The data are broken down into traditional Coursework Masters, Research Masters and PhD degrees, with the latter two divided into the three typical areas of Mathematics. These data are also represented in Figure 2, as part of the overall Higher Degree data for the period 1959–2014. The figure shows that:

(1) There was a considerable increase in the number of PhD completions compared with the previous two years. In 2014, there were 128 PhD completions (up from 109 in 2013 and 79 in 2012), of which 85 were by male students and 43 by female students. This represents a large increase in the number of male students (up from 73 in 2013) while the number of female students showed a reasonable increase (up from 36 in 2013).

(2) The number of Research Masters completions (12) again decreased slightly, down from 16 in 2013.

(3) There was a slight increase in coursework masters completions (62) in 2014, up from 58 in 2013, but fewer than in 2012 (67).

For those who are interested in the finer details, the raw data are available directly from me. Simply send me an e-mail. I have an Excel spreadsheet containing the complete data for 2014 as well as spreadsheets containing cumulative data from 1959 for Honours, Research Masters and PhD degrees.

I would like to thank the many people who took the time and effort to collect this data and forward it to me. This year I received 33 out of a possible 38 responses to requests for data, which is a very good response rate. Finally, if having read this report, you would like to contribute missing data for 2014, I would be happy to add it to the spreadsheet.

References

[1] Petocz, P. (1996). Higher degrees and honours bachelor degrees in mathematics and statistics completed in Australia 1993. *Gaz. Aust. Math. Soc.* **23,** 123–133.

[2] Johnston, P. and Petocz, P. (2002). Higher degrees and honours bachelor degrees in mathematics and statistics completed in Australia in 1994 and 1995. *Gaz. Aust. Math. Soc.* **29,** 62–72.

[3] Johnson, P. (2003). Higher degrees and honours bachelor degrees in mathematics and statistics completed in Australia between 1996 and 2001. *Gaz. Aust. Math. Soc.* **30,** 42–44.

[4] Johnston, P. (2003). Higher degrees and honours bachelor degrees 2002. *Gaz. Aust. Math. Soc.* **30,** 315–320.

[5] Johnston, P. (2004). Higher degrees and honours bachelor degrees in mathematics and statistics completed in Australia in 2003. *Gaz. Aust. Math. Soc.* **31,** 314–319.

[6] Johnston, P. (2005). Higher degrees and honours bachelor degrees in mathematics and statistics completed in Australia in 2004. *Gaz. Aust. Math. Soc.* **32,** 320–325.

[7] Johnston, P. (2006). Higher degrees and honours bachelor degrees in mathematics and statistics completed in Australia in 2005. *Gaz. Aust. Math. Soc.* **33,** 249–254.

[8] Johnston, P. (2007). Higher degrees and honours bachelor degrees in mathematics and statistics completed in Australia in 2006. *Gaz. Aust. Math. Soc.* **34,** 266–271.

[9] Johnston, P. (2008). Higher degrees and honours bachelor degrees in mathematics and statistics completed in Australia in 2007. *Gaz. Aust. Math. Soc.* **35,** 320–324.

[10] Johnston, P. (2009). Higher degrees and honours bachelor degrees in mathematics and statistics completed in Australia in 2008. *Gaz. Aust. Math. Soc.* **36,** 334–338.

[11] Johnston, P. (2010). Higher degrees and honours bachelor degrees in mathematics and statistics completed in Australia in 2009. *Gaz. Aust. Math. Soc.* **37,** 312–316.
[12] Johnston, P. (2011). Higher degrees and honours bachelor degrees in mathematics and statistics completed in Australia in 2010. *Gaz. Aust. Math. Soc.* **38,** 264–268.
[13] Johnston, P. (2012). Higher degrees and honours bachelor degrees in mathematics and statistics completed in Australia in 2011. *Gaz. Aust. Math. Soc.* **39,** 221–227.
[14] Johnston, P. (2013). Higher degrees and honours bachelor degrees in mathematics and statistics completed in Australia in 2012. *Gaz. Aust. Math. Soc.* **40,** 317–323.
[15] Johnston, P. (2014). Higher degrees and honours bachelor degrees in mathematics and statistics completed in Australia in 2013. *Gaz. Aust. Math. Soc.* **41,** 290–296.

Appendix 1. Number of Honours degrees completed in mathematics and statistics, 2014

Uni.	Sex	Maths			Pure			Applied			Statistics			Other			Honours
		I	IIA	IIB	III	I	IIA	IIB	III	I	IIA	IIB	III	I	IIA	IIB	III	Total
ACU	M																	0
	F																	0
ADF	M																	0
	F									1								1
ANU	M					5				5								10
	F					3				1								4
BOU																		0
																		0
CDU	M																	0
	F																	0
CQU	M																	0
	F																	0
CSU	M																	0
	F																	0
CUT																		0
																		0
DKU	M																	0
	F																	0
ECU	M																	0
	F																	0
FDU	M																	0
	F																	0
GFU	M									1								1
	F																	0
JCU	M													1				1
	F	1														1		2
LTU	M					2					1			2	1			6
	F													1				1
MDU	M																	0
	F													1	1			2
MNU	M					1	3			2	1			7				14
	F																	0
MQU	M																	0
	F																	0
QUT	M									4	1			2	1			8
	F									1						1		2
RMT	M									4	2							6
	F									2				1				3

Appendix 1. (continued)

Uni.	Sex	Maths				Pure				Applied				Statistics				Other				Honours
		I	IIA	IIB	III	I	IIA	IIB	III	I	IIA	IIB	III	I	IIA	IIB	III	I	IIA	IIB	III	Total
SCU	M																					0
	F																					0
SUT	M																					0
	F																					0
UAD	M						1			1	1			1	1							5
	F					1						1										2
UCB																						0
																						0
UNC	M								1					1								2
	F																					0
UNE	M																					0
	F																					0
UNS	M					2				2	2			1	2				1			10
	F									1												1
UQL	M					10				7	3			2	2							24
	F							1						2	1							4
USA	M									2												2
	F																					0
USN	M					8	1			5	1	1		3	1							20
	F									1				2								3
USQ	M													1								1
	F																					0
UTM	M					1				1												2
	F					2				1												3
UTS	M									1				1								2
	F										1				1							2
UWA	M					2								2				2	1			7
	F					1								2								3
UWG	M	1				2												2		1		6
	F					1				2		1				1						5
UWS	M	1																				1
	F										1											1
VUT																						0
																						0
Totals		2	1	0	0	41	5	1	1	45	14	3	0	31	12	2	0	5	3	1	0	167

Appendix 2. Number of two-year coursework masters degrees (with classifications) completed in mathematics and statistics, 2014

Uni.	Sex	Pure				Applied				Statistics				Other				Total
		I	IIA	IIB	III	I	IIA	IIB	III	I	IIA	IIB	III	I	IIA	IIB	III	
UMB	M	3				4				3	1		1				1	13
	F	2								2	1			1				6
Totals		5	0	0	0	4	0	0	0	5	2	0	1	1	0	0	1	19

Appendix 3. Number of research higher degrees completed in mathematics and statistics, 2014

Uni.	Sex	Coursework Masters	Research Masters Pure	Research Masters Applied	Research Masters Statistics	Research Masters Total	PhD Pure	PhD Applied	PhD Statistics	PhD Other	PhD Total
ACU	M					0					0
	F					0					0
ADF	M			1		1					0
	F					0		1			1
ANU	M	4		1		1	3	1			4
	F					0	1				1
BOU						0					0
						0					0
CDU	M					0					0
	F	1				0					0
CQU	M					0					0
	F					0					0
CSU	M					0					0
	F					0					0
CUT						0					0
						0					0
DKU	M					0		1			1
	F					0					0
ECU	M					0					0
	F					0					0
FDU	M					0		1			1
	F					0		1			1
GFU	M					0		1			1
	F					0					0
JCU	M					0					0
	F					0					0
LTU	M	1				0	1		1		2
	F	6				0	1		2		3
MDU	M					0					0
	F					0					0
MNU	M		1			1	2	2			4
	F					0	3	1	2		6
MQU	M			1		1	1				1
	F					0					0
QUT	M					0		1	2		3
	F					0		4	2		6
RMT	M	10				0		4	1		5
	F	12				0		2	1		3
SCU	M					0					0
	F					0					0
SUT	M					0		1			1
	F					0					0
UAD	M		2	1		3		4			4
	F					0		1			1
UCB						0					0
						0					0

Appendix 3. (continued)

Uni.	Sex	Coursework Masters	Research Masters Pure Applied Statistics			Research Masters Total	PhD Pure Applied Statistics Other				PhD Total
UMB	M			1		1	7	5	3		15
	F					0		3			3
UNC	M					0	1	1			2
	F					0					0
UNE	M					0					0
	F					0					0
UNS	M		1			1	1	2			3
	F			1		1	4	3			7
UQL	M	9				0	2	5	3		10
	F	6				0	1	1	1	1	4
USA	M					0		3			3
	F					0					0
USN	M					0	2	5	2		9
	F					0	1		3		4
USQ	M					0		2			2
	F					0					0
UTM	M					0		1			1
	F					0					0
UTS	M	1				0					0
	F	1				0					0
UWA	M					0	3	1			4
	F		1			1		1			1
UWG	M	7		1		1	2	4	3		9
	F	4				0		1	1		2
UWS	M					0					0
	F					0					0
VUT						0					0
						0					0
Totals		62	5	7	0	12	36	64	27	1	128