

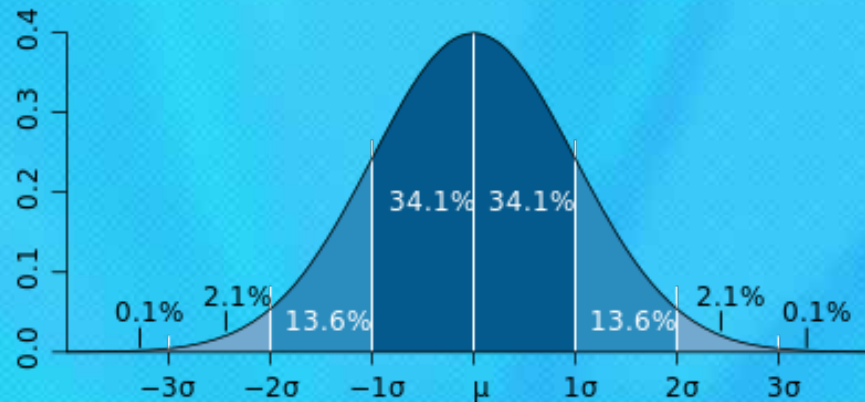
HSC Results 2013



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Explanation of Terms

- Standard deviation



- Standard deviation (σ) shows how much variation or dispersion from the average (mean) exists. Each band has a width of one standard deviation.
- The mean is the sum of all the numbers in the set (candidates scores in an HSC course), divided by the amount of numbers in the set (number of candidates).

Explanation of Terms cont...

- Z score:
- A z score for an HSC course is the school mean minus the state mean divided by the state standard deviation.
- Assume a normal curve distribution. Let's say the state HSC mean for a course is 70 and its standard deviation is 12. At High the course mean is 82. The calculated z-score is $(82-70)/12=1$.
- There are 15.9% of candidates left after the first standard deviation above the mean. As it happens, about 16.3% of students who apply are awarded an ATAR of 90 or more.
- NB The distribution for TES purposes is not normal.

Explanation of Terms cont...

- The school mean ATAR unit value:
- The school mean ATAR unit value is calculated as the school per unit scaled mean, minus the state per unit scaled mean, divided by the state per unit HSC standard deviation, multiplied by the ATAR per unit standard deviation; the result being added to the state ATAR mean unit scaled value.
- English Advanced HSC mean unit value 31.8 (av.25). At High the English Advanced mean unit scaled value was 38.04.
- Z-score 0.76 [n=202].

What Does ATAR Unit Value Mean?

- The ATAR unit value is the score the average SBHS student received in a course as a calculation towards an ATAR. The best ten scaled units (including 2 English) are aggregated to arrive at a TES and ATAR.

• 99.95	= 10 units @	47.7
• 99.5	= 10 units @	45.6
• 99.0	= 10 units @	44.6
• 98.0	= 10 units @	43.2
• 97.0	= 10 units @	42.3
• 96.0	= 10 units @	41.1
• 95.0	= 10 units @	40.4
• 94.0	= 10 units @	39.5
• 93.0	= 10 units @	38.7
• 92.0	= 10 units @	38.06
• 91.0	= 10 units @	37.58
• 90.0	= 10 units @	36.76

HSC Results 2013: Targets v Achieved

- 600 band 6 /E4 (achieved 585)
- 158 boys @ 90 ATAR or above (achieved 156)
- 45 @ 99 or above (achieved 37)
- 75 @ 95-98.95 (achieved 74)
- 42 @ 90-94.95 (achieved 45)
- ATAR Average of 93 (achieved 93.17)
- 76% of ATARs @ 90 or> (achieved 78.39)
- Reduce ATARs below 80 to 8.75% (achieved 8%)

HSC: Course Summary Table		DEC only		
Course	School 2013	School Average 2009-2013	SSG 2013	State DEC 2013
Biology	84.5	82.1	84.6	72.8
Business Studies	91.5	90.0	86.7	71.2
Chemistry	88.0	86.8	85.7	75.4
Economics	84.2	85.6	82.9	73.8
English (Advanced)	86.2	87.2	85.5	78.5
English Extension 1	90.2	88.8	86.8	81.3
Legal Studies	90.4	89.5	87.7	72.8
Mathematics	88.3	88.5	86.3	76.3
Mathematics Extension 1	87.3	88.2	87.7	81.4
Mathematics Extension 2	87.5	88.6	88.0	83.2
Modern History	88.3	87.8	86.6	73.5
History Extension	80.3	85.1	83.3	74.6
Music 2	94.1	91.3	90.2	86.4
Physics	86.9	85.3	84.0	73.3
Senior Science	91.0	88.5	89.3	71.9
Software Design and Development	88.6	86.9	85.1	72.9
Studies of Religion I	79.7	81.6	84.9	82.7
Studies of Religion II	81.7	84.2		69.2

Target Mean v Achieved Mean: n=>100

- Advanced English [n=202] 88 85.95
- Maths Extension 1 [n=173] 90 86.96
- Mathematics [n= 145] 88.5 88.35
- Maths Extension 2 [n= 123] 89.5 87.21
- Physics [n= 105] 84.9 86.65
- Chemistry [n= 104] 88 87.69

Target Mean v Achieved Mean: N=25-99

- Economics [n= 57] 87.5 84.01
- English Extension 1 [n= 41] 87.9 89.76
- Modern History [n=37] 88 88.06
- Legal Studies [n=25] 88.7 90.02

Target Mean v Achieved Mean: N=10-24

- Business Studies [n=19] 92 91.41
- Studies of Religion 1 [n=19] 86 79.12
- History Extension [n=13] 88 79.86
- Software Design [n=12] 88 88.20
- Senior Science [n= 10] 88 91.00
- Music 2 unit [n=10] 90 93.98
- Studies of Religion 2 [n=10] 87 81.58

Target Mean v Achieved Mean: N=6-9

• Geography	[n=9]	86.50	87.98
• Japanese Beginners	[n=8]	86.50	83.38
• Drama	[n=7]	86.50	84.40
• Engineering Studies	[n=7]	87.30	88.40
• Chinese Continuers	[n=6]	88.00	91.47
• German Continuers	[n=6]	86.50	73.30
• English Extension 2	[n=6]	88.00	78.06
• PDHPE	[n=6]	86.50	82.17
• Music Extension	[n=6]	88.00	98.06

Target Mean v Achieved Mean: N≤5

• Latin Continuers	[n=5]	86.50	85.08
• Visual Arts	[n=3]	86.50	94.40
• Ancient History	[n=3]	86.30	83.67
• Design and Technology	[n=3]	86.50	79.27
• Music 1	[n=1]	86.50	89.00
• Latin extension	[n=2]	88.00	78.50
• German extension	[n=2]	88.00	67.30
• French continuers	[n=1]	86.50	81.40
• Classical Greek	[n=1]	90.00	94.80

ATAR Value Per Course N>10

•	Course	Candidature	HSC	90th %	ATAR
•		No. in top1%	Mark	Mark	Value
•	Mathematics ext 2	34.0	48.5	47.0	47.0
•	Music 2	8.5	49.0	47.5	44.2
•	Mathematics ext 1	89.0	49.5	48.0	46.4
•	Physics	95.0	47.5	44.5	42.0
•	Chemistry	110.0	47.5	45 .0	42.6
•	English extension 1	50.0	48.0	46.0	42.3
•	Business studies	157.0	47.0	44.5	38.5
•	Mathematics	167.0	49.0	46 .0	42.5

Mean ATAR Value Per Course N \geq 10

Course	High Mean	Difference from
Unit Value	90 ATAR	36.7
• Mathematics ext 2	45.21	8.51
• Music 2	42.93	6.23
• Mathematics ext 1	42.84	6.14
• Physics	40.90	4.20
• Chemistry	40.72	4.02
• English extension 1	40.24	3.54
• Business Studies	40.22	3.52
• Mathematics	38.29	1.59

ATAR Value per course ≥ 10

Course	Candidature	90th % ATAR	No. in top 1%	+ Mark	Mark	Value
Economics	52	47.5	46.0	42.5		
English Advanced	270	47.5	45.0	41.8		
Software Design	16	47.5	44.0	37.6		
Modern History	104	47.5	45.0	39.7		
Legal Studies	98	47.5	45.0	39.6		
History extension	19	48.0	46.0	41.2		
Senior Science	52	47.5	44.5	33.8		
Studies of Religion 2	51	47.0	44.5	39.9		

Mean ATAR Value Per Course N \geq 10

• Course	High Mean	Difference from Unit Value 90 ATAR 36.7
• Economics	38.07	1.37
• English Advanced	38.04	1.34
• Software Design	37.81	1.11
• Modern History	36.87	0.17
• Legal Studies	36.44	-0.26
• History Extension	35.35	-1.35
• Senior Science	32.75	-3.95
• Studies of Religion 2u	31.78	-4.92

Top Twenty z-Scores – HSC Marks

• Visual Arts	1.759	Chemistry	1.015
• Business Studies	1.494	Music Course 1	0.958
• Software Design	1.398	Biology	0.941
• Engineering Studies	1.388	Modern History	0.923
• Senior Science	1.301	Mathematics 2unit	0.861
• Legal Studies	1.170	PDHPE	0.852
• Music 2 unit	1.156	Music extension	0.845
• Physics	1.103	English ext. 1	0.844
• Geography	1.049	Ancient History	0.822
• Chemistry	1.015	English Advanced	0.771

5 Year ATAR History

Year	Yr. 12	99+	95- 98	90- 94+	> =90	85- 89	80-84	<80
2009	199	33	80	42	77.89	22	6	16
2010	191	42	72	35	78.01	18	10	14
2011	207	57	80	33	83.09	16	9	12
2012	206	49	70	37	75.73	22	9	19
2013	200	37	74	45	78.39	15	13	16

Reported or Calculated ATARs

Year	Year 12	Average ATAR	Standard Deviation
2009	199	93.15	7.89
2010	191	92.98	9.32
2011	207	94.57	6.84
2012	206	92.65	9.33
2013	200	93.17	7.39

Where our Students Go

Destinations	2009	2010	2011	2012	2013
UNSW	96	92	100	124	117
Sydney	67	68	62	42	47
UTS	9	14	13	7	13
Macquarie	5	3	13	8	6
ANU	1	2	4	9	3
UWS	12	9	7	8	8
Newcastle	3	2	0	1	2
Other	3	3	8	7	4

What Courses Do They Do?

- All 200 boys were offered university places.

Course	2009	2010	2011	2012	2013
Engineering	43	32	47	34	48
Commerce	49	62	45	49	50
Law	15	21	30	27	17
Arts	14	7	7	13	12
Science	26	19	19	28	18
Health Sciences	35	27	30	41	38
Design	3	9	3	3	3
Communication	4	2	5	6	0
International Studies	2	2	3	1	6
IT / Systems	2	7	3	1	5
Education	4	0	1	2	0

