



HSC Results 2018

ATAR Predictor Results

Year 7 enrolments 92.58

Later years enrolments 89.28

Overall result 92.04

Individual results 3 @99.9

>= 99 30

95-99 72 80-84 10

90-94 53 75-79 12

85-89 17 70-74 4

<70 9

2018 ATAR Predictor Results Comparative Analysis

The lowest....

- number of ATARs ≥ 99 since 2007 (30) long-term average is 39.4
- number of ATARs ≥ 90 since 2010 (155) long-term average is 152
- average ATAR since 2005 @ 92.04 long-term average is 92.67
- percentage of students with ATARs ≥ 90 74.88% - nb long-term average is 76.37%
- multiple above state percentage of ATARs ≥ 90 @ 4.59 --nb long-term average is 4.69

2018 ATAR Predictor Results Comparative Analysis cont...

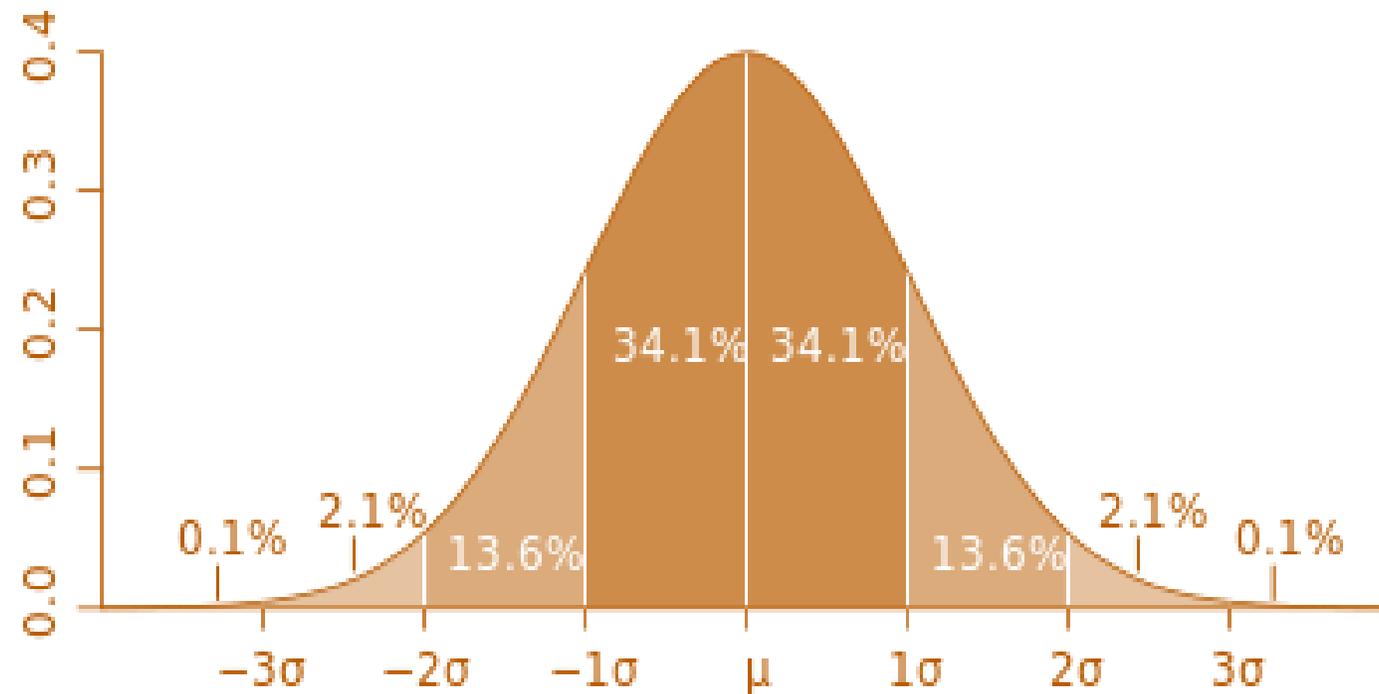
The highest...

- number of ATARs in the range 75-79 since the new HSC began @12, long-term average is 6.7
- percentage of ATARs ≤ 80 since 2005 @ 12.08%, long-term average is 8.83%
- number of students with ATARs < 90 since 2007 @ 52, long-term average is 47.

Nb of the lowest 25 ATARs, 16 students enrolled in Year 7.

Explanation of Terms

Standard deviation



Explanation of Terms cont...

Standard deviation (σ) shows how much variation of scores or dispersion from the average (mean) exists in a population. Each band has a width of one standard deviation.

The mean (μ) 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).

School standard. As 68.2% of scores fall below one standard deviation above the mean, we expect our school's mean in two unit courses only, to be at the level of at least one standard deviation above the mean.

Due to the scaling effects, as demonstrated later in the presentation, a target HSC mark for a two unit course is 88, because any lower and the scaled score per unit x by 10 units would not amount to 371 or 90 ATAR.

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 74 and its standard deviation is 12. At High the course mean is 86. The calculated z-score is $(86-74)/12=1$.

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. 90 ATAR is the minimum standard at High

NB The distribution of marks for ATAR purposes is curvilinear.

'Z' Score Comparison of courses – highly successful

Software design	1.28
Visual Arts	1.21
Senior Science	1.16
Business Studies	1.10
Chemistry	1.08
Ancient history	1.01
Engineering Studies	1.01

Our expectations are that in 2-unit courses a course mean should be as close to one standard deviation above the state mean as possible. N=7 for 2018

'Z' Score Comparison of means of courses

– successful 0.85-0.99

PD/H/PE	0.99
Music 2 unit	0.98
Biology	0.92
Modern History	0.90
Geography	0.89
Physics	0.89
Mathematics Advanced	0.86
Music 1	0.86

'Z' Score Comparison of means of Extension courses – highly successful

Music Extension	0.70
Mathematics Extension 1	0.69
English Extension 1	0.62
Mathematics extension 2	0.46*

Given the high scores and means of Extension courses in the state, if our mean is half a standard deviation above the state mean, that is a very successful result.

*Mathematics Extension 2 has a very high state mean.

How did 2018's results compare to past HSC results at High?

The following tables describe the course and a statement comparing this year's result to that of previous years in that course at High, going back as far as 2001 when the new HSC began.

The z-score for the course is followed by two scores at the 90th percentile. With similar pairs of scores for the 75th percentile and 50th percentile. The first score is the HSC mark at that percentile, followed by the ATAR scaled mark at that percentile.

The standard at High for a 2-unit mark, scaled for ATAR is 74.2

Scores highlighted in red fall below 74.2 at the 75th percentile HSC score

Course	Z-Score	90th	90th	75th	75th	50th	50th
Economics	0.68	91	86	86	78.6	76.6	63.4
Below long-term average							
Lowest since 2015							
Engineering Studies	1.01	89	77.6	83	67.6	75	52.3
Below long-term average							
Lowest since 2009							
English Advanced	0.56	91	83	87	75.6	81	63.2
Higher than 2017							
Well below long term average							
English Extension 1	0.62	94	87	92	81.2	85	71.6
Best result since 2015							
Well above long-term average							
English Extension 2	-0.05	92	89.4	86	81.4	76.2	70.6
Lowest result since 2005							
Well below the long-term average							

Course	Z-Score	90th	90 th	75 th	75 th	50 th	50 th
Chinese in Context	0.14	95	87.6	93	79.0	88.2	60.8
Lowest result since 2016							
Below medium-term average							
German Continuers	0.09	94	87.4	91	79.2	81.8	65.8
Best result since 2015							
Below long-term average							
Latin Continuers	0.06	95	95.4	94	92.4	87.6	81.2
Best result since 2012							
Below long-term average							
Latin Extension	-1.81	98	96.6	96	93.6	93	87.2
Worst result since new HSC began							
Well below long-term average							

How well did we perform compared to our statistically similar group?

How well did we perform against the state mean for the course?

How well did we perform against our own 5-year average?

The following tables comprise:

- **The name of the course with 10 or more candidates from High**
- **The HSC mean for High in the course**
- **The mean for the statistically similar school group**
- **The mean in the course or the state**
- **The mean in the course for the last five years at High**

**NB Scores highlighted in red were below the SSSG score or the
Average Mean of the last 5 years for High**

Course	SBHS 2018	SSSG Average 2018	State Average 2018	School Average 2014-2018
Biology	85.9	84.8	70.7	86.3
Business Studies	87.7	84.2	69.3	89.2
Chemistry	88.3	82.7	71.8	88.2
Economics	84.9	84.1	74.7	85.5
Engineering Studies	86.7	86	75.3	87.7
English (Advanced)	86	84	77.5	86.7
English Extension 1	90.9	87.2	85.8	89.9

Subject	School 2018	SSSG Average 2018	State Average 2018	School Average 2014-2018
Geography	87.2	86.6	70.6	88
Legal Studies	85.4	87.5	71.2	87
Mathematics	90	86.9	74.8	90.8
Mathematics Extension 1	90.8	87	78.7	91.9
Mathematics Extension 2	87.7	85.9	83.3	89.5
Modern History	87.6	85.7	69.5	87.7
Physics	85.2	80.9	70.6	86.2
Studies of Religion II	80.2	81.8	68.5	81.7

Comparing ourselves to the state over time

- * The first column describes the course and its number of candidates in the state current – highest – lowest and mean since 2001.
- * In the second column, there is the history of the state mean in the course - current – highest – lowest and mean since 2001.
- * In the third column, the ATAR unit value is recorded, where 25 is average.
- In the fourth column, the school ATAR value for the average student in the course – nb the school standard is 37.1

COMPARING OURSELVES AGAINST THE STATE

COURSE	NO.	STATE MEAN	ATAR UNIT VALUE SCALED	SCHOOL ATAR UNIT VALUE SCALED	ATAR Z-SCORE
Ancient History					
2018	8,177	36.6	23.3	34.61	1.042
High	12,144	37.5	25.1	37.60	1.27
Low	7,216	34.9	23.3	30.12	0.54
LTA	10,366	36.20	24.57	34.50	0.93
COURSE	NO.	STATE MEAN	ATAR UNIT VALUE SCALED	SCHOOL ATAR UNIT VALUE SCALED	Z-SCORE
Biology					
2018	18,105	37.2	26.3	35.55	0.92
High	18,152	37.4	26.9	37.48	1.12
Low	12,215	35.8	26.2	33.13	0.41
LTA	15,364	36.63	26.68	35.10	0.86

COMPARING OURSELVES AGAINST THE STATE

COURSE	NO.	STATE MEAN	ATAR UNIT VALUE SCALED	SCHOOL ATAR UNIT VALUE SCALED	Z-SCORE
Business Studies					
2018	17,611	37.0	24	35.83	1.10
High	17,611	37.4	24.3	40.83	1.62
Low	14,721	34.7	23.6	32.05	0.82
LTA	16,208	36.49	23.9	36.23	1.18

COURSE	NO.	STATE MEAN	ATAR UNIT VALUE SCALED	SCHOOL ATAR UNIT VALUE SCALED	Z-SCORE
Chemistry					
2018	11,133	37.6	31.5	41.73	1.08
High	11,173	38.3	31.8	42.43	1.13
Low	8,887	34.6	31.2	38.20	0.67
LTA	10,340	37.1	31.5	40.09	0.91

COURSE	NO.	STATE MEAN	ATAR UNIT VALUE SCALED	SCHOOL ATAR UNIT VALUE SCALED	Z-SCORE
Economics					
2018	5,190	38.3	31.7	38.28	0.68
High	6,136	38.8	32.2	40.08	0.88
Low	5,131	36.9	30.6	35.16	0.40
LTA	5,434	38.1	31.31	38.11	0.69
Engineering Studies					
2018	1,996	37.5	26.1	36.19	1.01
High	2,054	38.2	26.0	38.63	1.39
Low	1,274	32.6	25.0	32.38	0.75
LTA	1,718	37.0	25.6	35.92	1.10

COURSE	NO.	STATE MEAN	ATAR UNIT VALUE SCALED	SCHOOL ATAR UNIT VALUE SCALED	Z-SCORE
English Advanced					
2018	26,127	40.5	31.6	36.26	0.56
High	28,066	40.7	33.2	40.28	0.99
Low	20,123	38.5	31.2	34.47	0.21
LTA	26,155	39.8	31.8	37.13	0.65
English Extension 1					
2018	4,064	42.5	35.8	39.87	0.62
High	6,282	42.5	38.4	41.92	0.92
Low	3,813	38.8	35.4	35.09	-0.31
LTA	5,141	40.5	36.4	38.93	0.39

COURSE	NO.	STATE MEAN	ATAR UNIT VALUE SCALED	SCHOOL ATAR UNIT VALUE SCALED	Z-SCORE
English Extension 2					
2018	1,525	38.1	35.3	34.98	-0.05
High	2,608	41.6	38.1	45.29	1.38
Low	1,434	39.0	35.2	35.41	-0.46
LTA	2,056	39.9	36.3	37.95	0.24
Geography					
2018	4,427	37.6	25	34.93	0.89
High	6,210	38.6	26.0	39.15	1.31
Low	4,109	35.9	24.8	32.84	0.75
LTA	4,694	37.4	25.4	36.25	1.03

COURSE	NO.	STATE MEAN	ATAR UNIT VALUE SCALED	SCHOOL ATAR UNIT VALUE SCALED	Z-SCORE
Legal Studies					
2018	10,309	37.7	25.0	33.19	0.74
High	10,797	38.2	25.7	38.62	1.31
Low	7,523	33.1	25.1	29.82	0.44
LTA	8,978	37.0	25.3	35.42	0.95
Mathematics					
2018	17,825	39.3	31.2	39.26	0.86
High	20,799	39.4	31.3	40.54	1.02
Low	16,139	36.2	29.8	34.81	0.53
LTA	17,830	38.1	30.6	38.44	0.81

COURSE	NO.	STATE MEAN	ATAR UNIT VALUE SCALED	SCHOOL ATAR UNIT VALUE SCALED	Z-SCORE
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Mathematics Extension 1

2018	9,021	40.0	39.4	44.07	0.69
High	9,955	41.0	40.1	44.75	0.83
Low	6,240	36.6	37.6	41.34	0.41
LTA	8,831	39.7	39.4	43.36	0.57

Mathematics Extension 2

2018	3,164	40.9	43.7	45.66	0.46
High	3,512	41.9	44.7	46.71	0.70
Low	2,578	39.7	42.7	44.84	0.22
LTA	3,213	41.0	43.6	45.76	0.46



COURSE	NO.	STATE MEAN	ATAR UNIT VALUE SCALED	SCHOOL ATAR UNIT VALUE SCALED	Z-SCORE
Modern History					
2018	11,089	37.2	25.5	35.70	0.90
High	11,139	38.6	27.6	38.51	1.11
Low	8,751	37.1	25.5	32.07	0.48
LTA	10,014	37.8	26.9	35.96	0.84
History Extension					
2018	1,788	39.3	33.6	39.83	0.27
High	2,397	42.7	35.2	40.83	0.96
Low	1,524	34.6	33.6	33.02	-0.26
LTA	2,054	38.1	34.2	37.54	0.51

COURSE	NO.	STATE MEAN	ATAR UNIT VALUE SCALED	SCHOOL ATAR UNIT VALUE SCALED	Z-SCORE
Music 1					
2018	4,462	41.0	21.3	30.37	0.86
High	5,126	41.0	22.8	41.46	1.92
Low	3,555	37.2	21.1	26.07	0.37
LTA	4,508	39.8	21.9	33.24	1.13
Music 2 unit					
2018	735	43.9	33.7	41.51	0.98
High	850	43.9	34.4	43.68	1.37
Low	539	40.9	32.1	31.93	-0.05
LTA	684	42.7	33.3	38.69	0.68

COURSE	NO.	STATE MEAN	ATAR UNIT VALUE SCALED	SCHOOL ATAR UNIT VALUE SCALED	Z-SCORE
Music Extension					
2018	451	45.2	35.0	42.14	0.70
High	504	46.2	36.2	45.28	1.25
Low	332	41.7	33.9	31.85	-0.49
LTA	429	44.2	35.1	40.46	0.64
PDHPE 5 scores					
2018	15,986	35.7	22.8	33.30	0.99
High	15,986	37.7	23.7	38.74	1.50
Low	9,284	33.7	22.7	29.54	0.59
LTA	13,082	36.2	23.2	33.92	1.05

COURSE	NO.	STATE MEAN	ATAR UNIT VALUE SCALED	SCHOOL ATAR UNIT VALUE SCALED	Z-SCORE
Physics					
2017	9,454	36.8	30.5	39.00	1.00
High	10,158	37.8	30.7	41.18	1.11
Low	8,900	34.5	30.1	36.94	0.70
LTA	9,361	36.9	30.4	38.98	0.89
Senior Science 9 scores					
2018	6,536	35.6	18.3	30.10	1.16
High	7,061	37.7	19.2	32.75	1.37
Low	5,235	35.6	18.3	28.54	0.92
LTA	6,225	36.8	18.8	30.57	1.16

COURSE	NO.	STATE MEAN	ATAR UNIT VALUE SCALED	SCHOOL ATAR UNIT VALUE SCALED	Z-SCORE
Software Design		9 scores			
2018	1,711	37.3	24.6	38.33	1.28
High	3,666	37.9	26.1	39.10	1.45
Low	1,608	32.8	23.6	30.53	0.48
LTA	2,105	36.5	24.6	36.08	1.14
Studies of Religion 1 unit		4 scores			
2018	8,299	37.4	28.1	31.80	0.43
High	9,950	39.2	28.1	36.95	1.06
Low	8,926	37.6	27.1	29.16	0.20
LTA	9,260	38.5	27.6	31.31	0.43

COURSE	NO.	STATE MEAN	ATAR UNIT VALUE SCALED	SCHOOL ATAR UNIT VALUE SCALED	Z-SCORE
Studies of Religion 2 unit					
2018	6,192	37.6	27.4	31.43	0.41
High	6,280	39.4	27.8	39.89	1.26
Low	3,554	37.3	26.8	30.26	0.36
LTA	5,163	38.2	27.3	33.27	0.61
Visual Arts 4 scores					
2018	8,751	40.1	22.1	35.44	0.98
High	9,717	40.6	23.5	41.50	1.76
Low	8,462	36.1	21.9	26.86	0.35
LTA	9,079	39.5	22.8	32.89	0.94

Universities They Go To

Course	2012	2013	2014	2015	2016	2017	2018
New South Wales	126	117	124	145	127	147	137
Sydney	43	47	41	25	38	27	38
UTS	7	13	10	3	13	7	11
Macquarie	8	6	10	6	6	8	6
Australian Catholic	4	0	3	4	1	1	6
ANU	9	3	8	7	5	4	5
Western Sydney	8	7	4	8	11	9	3
Wollongong	0	1	0	2	1	1	1
other	1	6	5	5	4	1	0
total	206	200	205	205	205	205	207

University Courses They Do

Course	2012	2013	2014	2015	2016	2017	2018
Engineering	34	48	36	39	47	43	43
Commerce	49	50	65	64	54	50	56
Law	27	17	29	24	22	27	12
Arts	13	12	10	5	13	5	6
Science	28	18	12	11	18	10	36
Health Sciences	41	38	39	46	36	36	28
Design	3	3	2	0	4	6	7
Communication	6	0	0	3	4	1	0
International Studies	1	6	4	1	3	4	1
IT / Systems	1	5	1	6	3	16	15
Education	2	0	2	0	0	2	1