

## 2016 Scaling Report

VCAA provides VTAC with study scores (relative positions). These study scores are scaled in order to calculate scaled aggregates and Australian Tertiary Admission Ranks (ATARs). Candidates are in the 2016 scaling population if, excluding small studies, they have obtained at least one VCAA study score in 2016, at least four in total, at least one in an English study [English, English (SL), English Language or Literature], but do not already have an ATAR. The scaling population is therefore a subset of the entire population. The means and standard deviations below pertain to the scaling population in 2016.

The following table gives the 2016 scaled means and standard deviations as well as the VTAC scaled study scores (rounded to the nearest integer) corresponding to the study scores of 20, 25, 30, 35, 40, 45 and 50. The formal aggregation process uses VTAC scaled study scores to two decimal places, but the following information gives an indication of how scaling adjusts scores in the various studies.

Code	2016 Study	Mean	St. Dev.	20	25	30	35	40	45	50
AC	Accounting	30.7	7.3	20	25	31	36	41	46	50
AH	Agricultural & Horticultural Studies	23.8	6.4	14	18	22	27	33	40	50
AT	Art	27.2	7.6	15	21	26	32	38	45	50
BI	Biology	30.3	7.3	19	25	30	36	41	46	50
BM	Business Management	26.8	7.3	16	21	26	32	38	44	50
CH	Chemistry	33.7	7.3	22	28	34	39	44	47	50
CC	Classical Studies	30.7	7.5	19	25	31	36	41	46	50
DA	Dance	29.1	6.7	19	23	28	33	38	44	50
DR	Drama	28.2	7.5	17	22	28	33	39	45	50
DT	Product Design and Technology	24.1	6.9	13	18	22	28	34	41	50
EC	Economics	32.3	6.9	22	27	32	37	42	46	50
EG	English Language	32.7	7.2	22	27	33	38	43	47	50
EN	English	28.1	7.5	17	22	28	33	39	45	50
EF	English (EAL)	29.5	8.0	17	23	29	35	41	46	50
XI03	Extended Investigation	32.8	6.9	20	26	32	38	43	47	50
EV	Environmental Science	28.2	7.2	18	23	28	33	39	45	50
FT	Food and Technology	24.2	7.2	14	18	23	28	35	42	50
GE	Geography	29.0	7.1	18	23	28	34	39	45	50
HH	Health and Human Development	26.5	7.3	16	21	26	31	37	44	50
	<b>History:</b>									
HA	History: Australian History	28.2	7.9	16	22	28	34	40	45	50
HR	History: Revolutions	29.2	7.6	18	23	29	35	40	46	50
HI17	History: Ancient History	27.5	7.7	15	20	27	33	40	46	50
HS26	Hospitality D	26.1	7.0	15	20	25	31	37	43	50
HS27	Hospitality (Kitchen Operations) A	24.7	6.6	15	19	24	29	35	42	50
IE	Industry and Enterprise	25.1	8.0	11	16	22	28	36	43	50
	<b>Information Technology:</b>									
AL03	Algorithmics (HESS)	35.3	6.4	22	29	35	40	45	48	50
IT02	Computing: Informatics	26.0	7.1	15	19	24	30	36	43	50
IT03	Computing: Software Development	27.5	6.9	16	21	26	32	38	44	50
	<b>Politics:</b>									
PS03	Australian Politics	31.1	7.8	19	25	31	37	42	46	50
PS05	Global Politics	32.3	7.2	21	27	32	38	42	47	50
LS	Legal Studies	28.4	7.6	17	22	28	34	39	45	50
LI	Literature	31.0	7.3	20	26	31	36	41	46	50
	<b>Languages:</b>									
AL	Albanian									Small Study or no candidates, see Notes 1 & 2 below
AR	Arabic	30.2	7.4	19	25	30	35	41	46	50
AM	Armenian									Small Study or no candidates, see Notes 1 & 2 below
AU	Auslan	29.3	6.5	21	25	30	35	39	44	50
LO50	Bosnian									Small Study or no candidates, see Notes 1 & 2 below
LO53	Chin Hakha	27.7	5.6	18	23	27	32	37	43	50
CN	Chinese (FL)	36.0	7.4	21	29	35	41	46	49	51
CL	Chinese (SL)	40.1	6.3	31	36	41	45	48	51	53
CK	Chinese (SL Advanced)	38.4	7.3	26	33	39	44	48	51	53
AG	Classical Greek	42.3	6.7	33	39	44	48	51	53	55
LO51	Classical Hebrew									Small Study or no candidates, see Notes 1 & 2 below
CR	Croatian	34.5	8.6	14	21	30	38	45	49	52
DU	Dutch									Small Study or no candidates, see Notes 1 & 2 below
FP	Filipino	30.2	5.7	22	26	30	34	38	43	50
FR	French	40.4	6.4	30	36	41	45	49	51	53
GN	German	38.7	6.7	28	34	40	44	48	50	52
MG	Greek	34.9	6.3	26	31	36	40	44	47	50
HB	Hebrew	43.1	6.5	33	40	45	49	52	54	55
HI	Hindi	33.0	6.9	21	27	33	39	44	47	50
HU	Hungarian									Small Study or no candidates, see Notes 1 & 2 below

Code	2016 Study	Mean	St. Dev.	20	25	30	35	40	45	50
AI	Indigenous Languages of Victoria			Small Study or no candidates, see Notes 1 & 2 below						
IN	Indonesian (FL)			Small Study or no candidates, see Notes 1 & 2 below						
IX	Indonesian (SL)	37.0	6.7	27	33	38	42	46	49	50
IL	Italian	36.5	6.4	27	32	37	42	45	48	50
JA	Japanese (FL)	29.5	6.5	17	24	31	37	43	47	50
JS	Japanese (SL)	38.2	6.8	28	34	39	43	47	50	52
KH	Khmer	31.9	5.2	23	27	31	35	39	43	50
KO	Korean (FL)	31.7	6.1	24	29	33	37	42	46	50
KS	Korean (SL)	38.3	6.4	29	34	39	43	46	49	51
LA	Latin	44.7	7.4	34	41	46	50	53	54	55
MA	Macedonian	33.0	7.3	22	28	33	38	43	47	50
ML	Maltese			Small Study or no candidates, see Notes 1 & 2 below						
PN	Persian	28.1	6.7	17	22	27	33	38	44	50
PO	Polish	32.3	5.4	23	28	33	37	42	46	50
PG	Portuguese	33.8	4.4	26	30	33	36	39	43	50
LO49	Punjabi	33.5	7.7	22	27	32	37	41	46	50
RO	Romanian			Small Study or no candidates, see Notes 1 & 2 below						
RU	Russian	34.7	6.6	23	29	35	40	44	48	50
SE	Serbian	30.1	4.1	21	26	30	35	39	44	50
SI	Sinhala	34.7	6.3	26	31	36	40	44	47	50
SP	Spanish	33.2	7.0	22	28	34	39	43	47	50
SW	Swedish			Small Study or no candidates, see Notes 1 & 2 below						
TA	Tamil			Small Study or no candidates, see Notes 1 & 2 below						
TU	Turkish	29.0	7.1	18	23	29	34	40	45	50
UK	Ukrainian			Small Study or no candidates, see Notes 1 & 2 below						
VT	Vietnamese	35.0	6.7	24	30	35	40	44	48	50
LO52	Yiddish			Small Study or no candidates, see Notes 1 & 2 below						
	<b>Mathematics:</b>									
NF	Further Mathematics	27.8	7.1	18	23	27	33	38	44	50
NJ	Mathematical Methods	33.6	8.4	21	28	34	40	45	48	50
MA12	Mathematical Methods CBE	33.6	8.4	21	28	34	40	45	48	50
NS	Specialist Mathematics	39.7	8.2	27	34	41	46	50	53	55
ME	Media	26.5	7.5	15	20	25	31	37	44	50
	<b>Music:</b>									
MC04	Music Performance	29.7	7.3	19	24	29	35	40	45	50
MC05	Music Investigation	30.2	7.4	20	25	29	34	38	44	50
MD	Music Styles and Composition	31.8	7.6	18	24	31	37	42	47	50
OS	Outdoor and Environmental Studies	24.9	7.0	14	19	23	29	35	42	50
PL	Philosophy	29.2	7.5	17	23	29	35	41	46	50
PE	Physical Education	27.2	7.3	17	22	27	32	38	44	50
PH	Physics	32.0	7.3	21	27	32	37	42	47	50
PY	Psychology	28.2	7.3	17	22	28	33	39	45	50
RS	Religion and Society	28.9	7.6	18	23	29	34	40	45	50
SO03	Sociology	25.8	7.6	14	19	25	31	37	44	50
SA	Studio Arts	26.1	7.3	15	20	25	31	37	43	50
SE03	Systems Engineering	25.7	6.6	15	20	24	29	35	42	50
TT	Texts and Traditions	29.2	7.0	19	24	29	34	39	45	50
TS	Theatre Studies	28.8	7.4	18	23	28	34	39	45	50
VC	Visual Communication Design	26.9	7.2	16	21	26	32	38	44	50
	<b>VCE VET:</b>									
BU20	VCE VET Business	25.8	6.8	15	20	25	30	36	43	50
CT25	VCE VET Community Services	23.8	6.7	14	18	22	28	34	41	50
DN05	VCE VET Dance	27.6	6.5	19	23	27	31	35	41	50
EG16	VCE VET Engineering Studies	23.8	6.1	18	22	25	30	35	40	50
EQ04	VCE VET Equine Industry	27.0	5.9	18	22	26	30	35	41	50
FN16	VCE VET Furnishing	24.2	5.9	18	22	26	30	35	41	50
HS13	VCE VET Hospitality	26.1	7.0	15	20	25	31	37	43	50
HS14	VCE VET Hospitality – Kitchen Operations	24.7	6.6	15	19	24	29	35	42	50
IN50	VCE VET Information Technology	24.4	6.2	17	21	25	29	34	40	50
ET11	VCE VET Integrated Technologies	24.7	6.3	15	18	23	28	33	40	50
MU05	VCE VET Interactive Digital Media	25.2	7.5	15	19	24	30	36	43	50
LB20	VCE VET Laboratory Skills	30.7	7.0	20	25	30	35	40	45	50
MI13	VCE VET Music	26.3	6.7	17	21	26	30	36	42	50
SR29	VCE VET Sport and Recreation	23.9	6.9	14	18	23	28	34	41	50
MI15	VCE VET Technical Production	26.3	6.8	17	21	26	32	38	44	50

NOTES:

1. Small Studies were not scaled by the automatic procedure, since their eligible scaling population was less than or equal to ten. The means and standard deviations are not given in these cases, since they are not as useful.
2. For small VCE Languages, the Language adjustment is the maximum of zero and the average Language adjustment over the previous three years. The following table gives the ATAR Subject Scores for small VCE Languages in 2016.

**Small VCE Languages - 2016 VTAC Scaled Study Scores**

Small VCE Language Study Score	1	2	3	4	5	6	7	8	9	10
2015 VTAC Scaled Study Score	1	2	3.05	4.21	5.39	6.61	7.84	9.09	10.35	11.62
Small VCE Language Study Score	11	12	13	14	15	16	17	18	19	20
2015 VTAC Scaled Study Score	12.89	14.16	15.44	16.71	17.97	19.23	20.48	21.72	22.95	24.17
Small VCE Language Study Score	21	22	23	24	25	26	27	28	29	30
2015 VTAC Scaled Study Score	25.38	26.56	27.74	28.89	30.03	31.14	32.24	33.31	34.37	35.4
Small VCE Language Study Score	31	32	33	34	35	36	37	38	39	40
2015 VTAC Scaled Study Score	36.41	37.4	38.37	39.31	40.23	41.13	42	42.85	43.67	44.47
Small VCE Language Study Score	41	42	43	44	45	46	47	48	49	50
2015 VTAC Scaled Study Score	45.25	46	46.73	47.43	48.11	48.75	49.37	49.94	50.45	50.82

**2016 Scaled Aggregate Table**

Based on the 2016 scaling and aggregation process, the following table gives an indication of the minimum scaled aggregate required to achieve at least a particular ATAR. The table can be used to check roughly an ATAR calculation.

<b>2016 ATAR</b>	<b>Min Scaled 2016 Aggregate for ATAR</b>
40.00	90.65
45.00	96.73
50.00	102.43
55.00	108.23
60.00	114.23
62.00	116.61
64.00	118.93
66.00	121.45
68.00	123.88
70.00	126.42
72.00	128.92
74.00	131.69
76.00	134.48
78.00	137.32
80.00	140.34
82.00	143.71
84.00	147.15
86.00	150.87
88.00	154.53
90.00	158.66
91.00	160.98
92.00	163.37
93.00	165.96
94.00	168.55
95.00	171.72
96.00	175.17
97.00	179.42
97.50	181.84
98.00	184.53
98.50	187.67
99.00	191.63
99.25	194.29
99.50	197.65
99.60	199.47
99.70	201.41
99.80	204.70
99.90	207.87