REPORT ON THE SCALING OF THE 2017 NSW HIGHER SCHOOL CERTIFICATE

UAC

CONTENTS

PREFACE

In New South Wales student achievement in Stage 6 (Years 11 and 12) is reported in two ways: through the Higher School Certificate Record of Achievement and through the Australian Tertiary Admission Rank (ATAR).

A student's Higher School Certificate Record of Achievement presents a profile of their achievement in the courses they have completed, both academic and vocational. Their achievement is reported in terms of the standards they have reached in the courses they have completed.

In contrast, the Australian Tertiary Admission Rank (ATAR) is a numerical measure of a student's overall academic achievement in the HSC in relation to that of other students. This measure allows the comparison of students who have completed different combinations of HSC courses and indicates the position of a student in relation to other students. The ATAR is calculated solely for use by universities, either on its own or in conjunction with other selection criteria, to rank and select school leavers for admission to university.

Calculation of the ATAR is the responsibility of the Technical Committee on Scaling on behalf of the NSW Vice-Chancellors' Committee. The NSW Education Standards Authority (NESA) provides the HSC data from which the ATARs are calculated and the Universities Admissions Centre (UAC) advises individual students of their ATARs.

This report contains information on the calculation of the ATAR in 2017.

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Chair, Technical Committee on Scaling
Macquarie University
February 2018

ACKNOWLEDGEMENTS

Calculating individual ATARs each year and distributing them to the students who requested them is a major task. It requires a high degree of expertise, commitment and co-operation between the staff of several agencies:

- staff of NSW Education Standards Authority (NESA) who supply the HSC data from which the ATARs are calculated
- staff of UAC who distribute the ATARs to individual students, handle enquiries from students following the release of the results and distribute information about the ATAR to schools during the year
- members of the Technical Committee on Scaling who play a central role with responsibility for translating policy decisions into processes, and for developing and maintaining programs that ensure the integrity of the data and the accuracy of the individual ATARs
- those members of the Technical Committee on Scaling who work closely with the Chair of the Committee when the ATARs are calculated, and at other times during the year.

Without the skill and commitment of these people, the calculation and distribution of the ATARs would not be possible.

DEFINITIONS

ABS

The ABS is the Australian Bureau of Statistics.

ATAR COHORT

ATAR cohort is used to refer to those students who received an ATAR in a particular year. The students may have accumulated courses over a five-year period.

ATAR COURSES

ATAR courses are Board Developed courses for which there are examinations conducted by NESA that yield graded assessments. English Studies and Life Skills courses are not ATAR courses. If students wish to have a VET course contribute to their ATAR eligibility requirements and calculation, they must enrol in the appropriate additional examination course and complete the examination.

BOARD DEVELOPED COURSES

Board Developed courses are courses whose syllabuses have been developed by NESA.

BOARD ENDORSED COURSES

Board Endorsed courses are courses whose syllabuses have been approved by NESA but which do not have formal examinations conducted by NESA.

HSC COHORT

HSC cohort refers to students who have completed at least one ATAR course in a particular year.

NESA

NESA refers to NSW Education Standards Authority (NESA). Prior to 1 January 2017, NESA was known as the Board of Studies, Teaching and Education Standards (BOSTES).

VET EXAMINATION COURSES

The VET Curriculum Frameworks are based on training packages where the assessment is competency based. As competency-based assessment does not yield a mark that can be used in the ATAR calculations, NESA introduced an additional course for each VET Curriculum Framework that includes an examination. If students wish to have a VET course contribute to their ATAR eligibility requirements and calculation, they must enrol in the appropriate additional course and complete the examination. These additional courses are termed VET examination courses. Students who do not want their VET courses to contribute towards their ATARs are not required to complete these optional examinations.

1 THE HIGHER SCHOOL CERTIFICATE (HSC)

The Higher School Certificate (HSC) is an exit certificate awarded and issued by NESA. It marks the completion of 13 years of schooling, is the gateway to further study and employment, and presents a profile of student achievement in a set of courses.

1.1 ELIGIBILITY FOR AN HSC

To qualify for an HSC, students must complete a pattern of Preliminary and HSC courses containing at least 12 units of Preliminary courses and at least 10 units of HSC courses.

These HSC courses must include at least:
- six units of Board Developed courses
- two units of a Board Developed course in English (or the non-ATAR course, English Studies)
- three courses of two unit value or greater (either Board Developed or Board Endorsed courses)
- four subjects.

Further details about HSC eligibility and HSC courses can be found on NESA's website.

1.2 REPORTING STUDENT ACHIEVEMENT IN THE HSC

For most ATAR courses, NESA reports student achievement against published standards by:
- an examination mark
- a school assessment
- an HSC mark
- a performance band.

These results are shown on a student's Record of Achievement. A Course Report is also provided for most Board Developed courses. The report describes the standard achieved in the course using performance bands and provides a graph indicating the student's position in the course candidature.

1.2.1 Defining standards by performance bands

Standards in a course are described in terms of the content, skills, concepts and principles relevant to the course and represent the range of achievement expected of students completing the course. Performance band descriptors, which describe typical achievement at different standards (bands), have been developed for each course. There are six performance bands for 2-unit courses and four performance bands for Extension courses.

The percentage of students in any performance band depends only on how many students enrolled in that course perform at the standard specified by the performance band descriptor. There are no predetermined percentages of students to be placed in the performance bands.

It follows that, although the standards described by the performance bands in a course will be the same from year to year, standards in different courses are not the same as they are based on different criteria. Because of this, it should not be expected that the percentages of students in the six bands

will be the same across courses. For any course, the percentages will also vary from year to year if the performance of the cohort choosing that subject changes.

The ranges of marks for the bands are as follows:

2-unit courses

Band	1	2	3	4	5	6
Mark range	0–49	50–59	60–69	70–79	80–89	90–100

Extension courses (except Mathematics Extension 2)

Band	E1	E2	E3	E4
Mark range	0–24	25–34	35–44	45–50

Mathematics Extension 2*

Band	E1	E2	E3	E4
Mark range	0–49	50–69	70–89	90–100

**Mathematics Extension 2 students have their achievement for both Mathematics Extension 1 and Mathematics Extension 2 reported using four bands but the mark range is out of 100 rather than 50.*

1.2.2 Examination marks

The examination mark reported on a student's Record of Achievement indicates the standard a student has attained in that examination. If, for example, a student's performance in the Society and Culture examination is at the standard described for Performance Band 3, the examination mark reported on their Record of Achievement for that course will lie between 60 and 69. In general, this mark, termed the aligned examination mark, will differ from the mark the student actually gained on the examination (the raw examination mark).

The aligned mark indicates the standard reached by a student and their position in the performance band. For example, a mark of 62 means that, while the student has performed at a Performance Band 3 standard, their achievement is towards the bottom of this band.

1.2.3 School assessments

To enable school assessments from different schools to be compared, marks submitted by schools (raw assessments) are first moderated using the raw examination marks gained by their students and then aligned to course standards. The school assessments reported on a student's Record of Achievement are the aligned assessments.

The process used for the moderation of school assessments and subsequent alignment with standards ensures that the rank order of a school's students in a course is maintained.

1.2.4 HSC marks

For each course, students receive three marks, an examination mark, a school assessment and an HSC mark, all of which have been aligned to NESA's published standards and rounded to whole numbers. The HSC mark is the average of the examination mark and the school assessment. It is the HSC mark that determines a student's performance band for the course.

Further details about NESA's processes can be found on NESA's website.

2 THE AUSTRALIAN TERTIARY ADMISSION RANK (ATAR) – AN OVERVIEW

2.1 BACKGROUND

The Australasian Conference of Tertiary Admission Centres (ACTAC) agreed that, as of 2010, all states and territories would adopt a common name for the ranking index used to rank students for university admission. The agreed name was the Australian Tertiary Admission Rank (ATAR). The name change was to emphasise the common scale used for reporting student ranks. NSW and the ACT adopted the new name in 2009.

The ATAR is a numerical measure of a student's overall academic achievement in the HSC in relation to that of other students. This measure allows the overall achievement of students who have completed different combinations of HSC courses to be compared. The ATAR is calculated solely for use by tertiary institutions, either on its own or in conjunction with other criteria, to rank and select school leavers for admission. Calculation of the ATAR is the responsibility of the Technical Committee on Scaling on behalf of the NSW Vice-Chancellors' Committee.

The ATAR, which aims to provide a fair and equitable method of ranking applicants from all states, is based on the assumption that the age cohorts from which the states' Year 12 cohorts are drawn are equally able to undertake tertiary study. That is, if everyone in the age group completed Year 12, it would be fair to consider the same proportion of each state's students as admissible to any particular university course.

The result of this procedure in NSW is a number which represents the position of a student in the appropriate age cohort, based on their overall academic achievement in the HSC.

From 1998 until 2013 NSW used data from the School Certificate tests administered by NESA as the link that enabled the positions of HSC students relative to their Year 10 group to be estimated from their positions relative to their Year 12 group. With the move to the ATAR in 2009, the School Certificate group was augmented to more accurately reflect the corresponding Year 7 cohort that is used in other states. The last School Certificate tests were held in 2011 so that procedure is no longer available.

From 2014 to 2016, a two-parameter logistic function was used to translate the HSC students' positions based on their scaled aggregate marks into ATARs. This was consistent with the procedure that had been used in most other jurisdictions without Year 10 examinations.

In 2016, all jurisdictions agreed to transition to a consistent process using a one-parameter cubic spline function, depending only on the proportion of the age cohort that is ATAR eligible, as the means for converting student aggregates into ATARs. This was implemented in NSW in 2017. At present, Queensland is the only state not using this methodology. It should be emphasised that these changes do not alter the rank order of students, and that changes are sufficiently small to permit valid comparisons of ATARs obtained in different years.

The ATAR is reported as a **number** between 0 and 99.95 with increments of 0.05. The ATAR is not a mark. Specifically, a student's ATAR indicates the position of that student relative to their Year 7 cohort. Students who receive an ATAR of 80.00 in 2017, for example, have performed well enough in the HSC to place them 20 per cent from the top of their Year 7 cohort if all the 2012 Year 7 students completed Year 12 and were eligible for an ATAR in 2017.

Students who indicate on their HSC entry forms that they wish to be notified of their ATARs will receive an ATAR Advice Notice from UAC. ATARs are also made available to institutions for selection purposes.

2.2 CATEGORISATION OF ATAR COURSES

ATAR courses are assessed by formal examinations conducted by NESA and have sufficient academic rigour to be regarded as suitable preparation for university study.

ATAR courses are classified as either Category A or Category B courses. The criteria for Category A courses are academic rigour, depth of knowledge, the degree to which the course contributes to assumed knowledge for tertiary studies, and the coherence with other courses included in the ATAR calculations. Category B courses are those whose level of cognitive and performance demands are not regarded as satisfactory in themselves, but their contribution to a selection index is regarded as adequate if the other courses included in the aggregate are more academically demanding.

The Category B courses in 2017 were:

- Automotive Examination
- Business Services Examination
- Construction Examination
- Electrotechnology Examination
- Entertainment Industry Examination
- Financial Services Examination
- Hospitality Examination
- Human Services Examination
- Information and Digital Technology Examination
- Metal and Engineering Examination
- Primary Industries Examination
- Retail Services Examination
- Tourism, Travel and Events Examination.

2.3 ELIGIBILITY FOR AN ATAR IN 2017

To be eligible for an ATAR a student must have satisfactorily completed at least 10 units of ATAR courses, which included at least:

- eight units of Category A courses
- two units of English
- three courses of two units or greater
- four subjects.

2.4 CALCULATION OF THE ATAR

The ATAR is based on an aggregate of scaled marks in 10 units of ATAR courses comprising:

- the best two units of English
- the best eight units from the remaining units, which can include up to two units of Category B courses.

Marks to be included in the ATAR calculations can be accumulated over a five year period but if a course is repeated only the last satisfactory attempt is used in the calculation of the ATAR.

For students accumulating courses towards their HSC, scaled marks are calculated in the year the courses are completed.

2.5 THE ATAR ADVICE NOTICE

The ATAR Advice Notice includes:

- the student's ATAR
- a list of the ATAR courses which the student studied and the categorisation of each course
- the number of units of each ATAR course that were actually included in the calculation of the ATAR.

While ATARs are calculated for all ATAR-eligible students, only those students who indicate on their HSC entry forms that they wish to be notified of their ATAR will receive an ATAR Advice Notice from UAC.

There are two circumstances where an ATAR will not be shown on the ATAR Advice Notice. The first is when a student receives an ATAR between 0.00 and 30.00, in which case the ATAR will be indicated as '30 or less'. The second is when the student has not met the requirements for an ATAR, in which case the statement 'Not Eligible' will appear.

An example of an ATAR Advice Notice is given below.

ABN 19 070 055 935 ACN 070 055 938

Quad 2, 6 Parkview Drive, Sydney Olympic Park NSW
Locked Bag 112, Silverwater NSW 2128
1300 ASK UAC (1300 275 822)
from mobiles: (02) 9752 0200 from overseas: +61 2 9752 0200
uac.edu.au

UNIVERSITIES ADMISSIONS CENTRE

AUSTRALIAN TERTIARY ADMISSION RANK
2017 ADVICE

Full name	APPLICANT TEST
Year 12 student number	12345678
AUSTRALIAN TERTIARY ADMISSION RANK (ATAR)	**56.10 *FIVE*SIX***ONE*ZERO***

Shown below are the ATAR courses which were available for inclusion in your ATAR, together with the units that were actually included in the calculation. Information about ATAR eligibility and the calculation of the ATAR are available at http://www.uac.edu.au/atar

Course name	Category	Year completed	Unit value	Units included in calculation of ATAR
English Standard	A	2017	2	2
Industrial Technology	A	2017	2	1
Mathematics	A	2017	2	2
Mathematics Extension 1	A	2017	1	1
Software Design & Development	A	2017	2	2
Information & Digital Tech Exam (Digital Animation)	B	2016	2	2

Dr David Christie
Managing Director
15 December 2017

This notice is **digitally signed** by Universities Admissions Centre and registered on the **Ethereum Blockchain** network.

To verify the validity of this notice, scan the QR code using a compatible mobile phone, or visit the link below and enter the Year 12 student number and date of birth.

https://verify.uac.edu.au/digital-atar/2017/fa8ae4e5-634b-33d6-b336-527a66bd20ef

3 CALCULATING THE ATAR IN 2017

3.1 OVERVIEW

Tertiary institutions are concerned with ranking school leaver applicants. From their perspective, the importance of HSC marks is that they convey information about a student's position in relation to other students.

With the exception of English, which is compulsory, students are free to choose their courses of study. Consequently, individual course candidatures vary in size and nature, and there are many different enrolment patterns. In 2017 there were 27,546 different enrolment patterns for ATAR-eligible students; only 209 of these 27,546 combinations were completed by 20 or more students and 19,886 were taken by only one student. Given the choice available, it follows that a student's rank in different courses will not necessarily have the same meaning, as good rankings are more difficult to obtain when the student is competing against students of high academic ability.

Because of the lack of comparability of HSC marks achieved in different courses, either when reported against standards or in terms of ranking, marks of individual students are scaled before they are added to give the aggregates from which the ATARs are determined.

The scaling process is designed to encourage students to take the courses for which they are best suited and which best prepare them for their future studies. The underlying principle is that a student should neither be advantaged nor disadvantaged by choosing one HSC course over another. The scaling algorithm estimates what students' marks would have been if all courses had been studied by all students and all courses had the same distribution of marks.

The scaling model assumes that a student's position in a course depends on the student's developed ability in that course and the 'strength of the competition'. Since the ATAR is a rank that reflects academic achievement, 'strength of the competition' is defined in terms of the demonstrated overall academic attainment of a course candidature.

Scaling first modifies the mean, the standard deviation (SD) and the maximum mark in each course. Adjustments are then made to the marks of individual students to produce scaled marks, which are the marks the students would have received if all courses had the same candidature and the same mark distribution.

Although scaled marks are generally different from the raw marks from which they are derived, the ranking of students within a course is not changed.

Once the raw marks have been scaled, aggregates are calculated for ATAR-eligible students. Percentiles, which indicate the ranking of students with respect to other ATAR-eligible students, are then determined on the basis of these aggregates. In most cases, the ranking or order of merit based on these aggregates is quite different from the order of merit using aggregates based on HSC marks.

The penultimate step is to determine what the percentiles would have been if all students in their Year 7 cohort completed Year 12 five years later and were eligible for an ATAR. The last step is to truncate these percentiles to the nearest 0.05. These are the ATARs.

Each ATAR corresponds to a range of aggregates. The target for the number of students with each ATAR varies and is calculated using the cubic spline function referred to in section 2.1. The presence of candidates tied on the same aggregate means that the actual number of students with each ATAR may differ slightly from the calculated target.

The scaling process is carried out afresh each year. It does not assume that one course is intrinsically more difficult than another or that the quality of the course candidature is always the same. All students who complete at least one ATAR course in a given year are included in the scaling process for that year. Students who are accumulating courses towards their HSC have their scaled mark for each course calculated in the year that the course is completed.

3.2 THE SCALING PROCESS IN 2017

The scaling procedure used to produce the aggregates in 2017 was unchanged from that used in 2016.

3.2.1 Marks used in the ATAR calculations

For each course a student completes, the Board provides the following marks:

- a raw examination mark
- a raw moderated school assessment[1]
- an examination mark, which has been aligned to course standards
- a moderated school assessment, which has been aligned to course standards
- an HSC mark.

All marks are provided on a one-unit basis to one decimal place. In the description of the scaling process that follows, to cater for both 2-unit and Extension courses, marks are described on a one-unit basis.

3.2.2 Raw HSC marks

Raw HSC marks, rather than NESA's reported HSC marks, are used in the scaling process. A student's raw HSC mark in a course is the average of their raw examination mark and their raw moderated school assessment. These marks are not reported to students.

3.2.3 Combined courses

As NESA places English Standard and English Advanced raw marks on a common scale, these courses are combined and scaled as a single course but are reported as separate courses in order to be consistent with NESA's reporting practice.

Similarly, while the examinations for the Automotive, Information and Digital Technology, and Hospitality VET Frameworks are separated into two or more streams, NESA places the raw examination marks for the various streams in each framework on a common scale. Consequently, the Automotive Exam, Information and Digital Technology Exam and Hospitality Exam are each scaled as a single course.

3.2.4 Initial standardisation

Before the scaling algorithm is implemented, a linear transformation is applied to the raw HSC marks in each course to set the top mark to a common value. The marks in each course are then standardised to a mean of 25 and standard deviation of 12 on a one-unit basis.

3.2.5 Calculating scaled means and standard deviations

The model underpinning the scaling algorithm specifies that the scaled mean in a course is equal to the average academic achievement of the course candidature where, for individual students, the measure of academic achievement is taken as the average scaled mark in all courses completed. The model specification leads to a set of simultaneous equations from which the scaled means of 2-unit courses are calculated.

The scaled standard deviation for a 2-unit course is the standard deviation of the measure of overall academic achievement of the candidature of that course.

For Extension courses, the scaled means and standard deviations are determined by the performance of the Extension students on the corresponding 2-unit courses. The exceptions are History Extension which can be completed by both Modern History and Ancient History students, and the second Extension courses in English and Mathematics: English Extension 2 and Mathematics Extension 2.

[1] *These are school assessments that have been moderated using the raw examination marks*

A scaled mean is determined for the Modern History students in History Extension on the basis of their performance in the 2-unit Modern History course. A scaled mean for the Ancient History students in History Extension is found in a similar manner. The scaled mean for History Extension is then set equal to the weighted average of these two scaled means. The scaled standard deviation is found in a similar manner.

Scaled means and standard deviations for English and Mathematics Extension 1 courses are calculated as described above. The scaled mean and standard deviation for the Mathematics Extension 2 course are then determined by the performance of the Extension 2 students in the Mathematics Extension 1 course. For English Extension 2, the scaled mean and standard deviation are determined by the performance of the Extension 2 students in English Advanced. (This option is not available for Mathematics as the Extension 2 students do not complete the Mathematics 2-unit paper.)

3.2.6 Setting maximum marks

The maximum possible scaled mark in a course is determined according to the academic quality of the course candidature in such a way that the maximum possible scaled mark for the combined 2-unit English candidature is 50 on a one-unit basis.

In 2017 the maximum possible scaled mark in a course was given by the smaller of 50 and the scaled mean + 2.47 times the initial scaled standard deviation, where the scaled mean and initial scaled standard deviation of the course are determined using the scaling algorithm.

The number 2.47 was determined on the basis that the maximum possible scaled mark in the combined 2-unit English course is 50. This number is calculated afresh each year.

3.2.7 Scaling individual marks

Once the scaled means and standard deviations are determined, individual raw marks are scaled using a non-linear transformation which preserves the scaled mean and standard deviation of a course and restricts the scaled marks to the range (0–50).

If the actual maximum scaled mark in a course is less than the maximum possible scaled mark a further linear transformation is applied. The effect of this linear transformation is to increase the standard deviation so that the actual maximum scaled mark in the course is changed to be the same as the maximum possible scaled mark. The transformation does not affect the scaled mean. In all tables presented in this report, the modified scaled standard deviations rather than the initial scaled standard deviations are shown.

For some courses with very small candidatures the non-linear transformation is not always appropriate, in which case alternative transformations, which are consistent with the principles of the scaling algorithm, are used.

3.2.8 Calculating aggregates and ATAR-eligible percentiles

Aggregates of scaled marks are calculated to one decimal place according to the rules described in section 2.4. In 2017 there were 4,487 distinct aggregates. There are a large number of tied results with some aggregates shared by more than 30 students.

ATAR-eligible percentiles, which show the position of students relative to their ATAR cohort, are then determined for these aggregates. The ATAR-eligible percentile corresponding to a particular aggregate is the percentage of the ATAR cohort who received an aggregate mark less than or equal to that aggregate.

Table 3.1 shows the ATAR-eligible percentiles corresponding to selected aggregates for the 2017 ATAR cohort. From the table, it can be seen that, for example, 77.0 per cent of the 2017 ATAR cohort received an aggregate mark of 350 or less.

Table 3.1 ATAR-eligible percentiles corresponding to selected aggregates in 2017

Aggregate	ATAR-eligible percentile
450.0	98.7
400.0	90.9
350.0	77.0
300.0	60.7
250.0	44.0
200.0	28.3
150.0	14.8

3.2.9 Calculating the ATAR

In 2017 a one-parameter cubic spline model was used to translate the ATAR-eligible percentiles into ATARs. This model was adopted by some jurisdictions in 2016, and was used in all jurisdictions except Queensland in 2017. The model depends only on the participation rate observed in the jurisdiction.

The specific form of the cubic spline function will depend on the proportion of students in the target population who are ATAR-eligible. This proportion is called the participation rate. In 2017 the participation rate in NSW, determined using ABS data, was 61.0 per cent, up from 60.2 per cent in 2016.

For jurisdictions with participation rates between 25 percent and 75 percent, the model expects that the proportion of people whose percentile rank within the target population is x who will be ATAR eligible is given by

$$\frac{x^3}{(1000\alpha)^2} \text{ if } 0 \le x \le 100\alpha \text{ and } 1 - \frac{(100-x)^3}{(1000-1000\alpha)^2} \text{ if } 100\alpha \le x \le 100$$

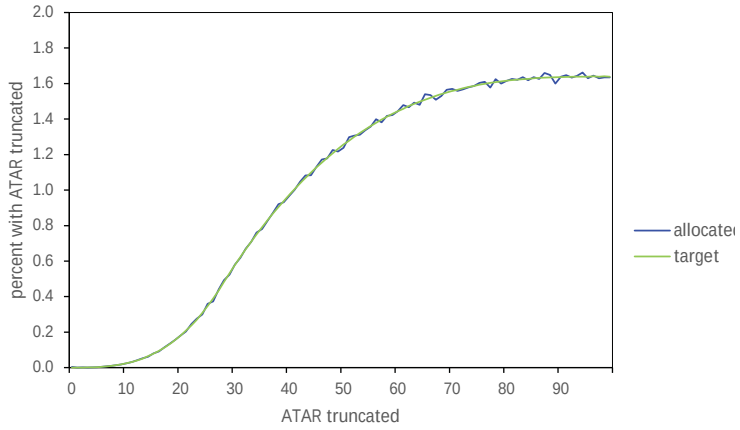
where α is 1.5 – 2*(participation rate). In 2017, the value of α in NSW was 0.28.

In particular, the model expects all the most able candidates to complete Year 12 and be eligible for an ATAR, and so the top category should contain 1/2000th of the target population. In 2017 this target frequency for an ATAR of 99.95 was N = 46.

With the 2017 NSW participation rate, the model expects that 94.8% of candidates who are at the 70th percentile in the target population will complete Year 12 and be eligible for an ATAR. Accordingly, the target frequency for an ATAR of 70.00 is 94.8% of 1/2000th of the target population, which was 44 students.

Starting with the highest aggregate the candidates are progressively allocated to ATAR categories to achieve the cumulative target frequencies. There is noise in the allocation due to ties in the aggregates. The resulting pattern is shown in Figure 3.1.

Figure 3.1 Percentage of ATAR-eligible students in each ATAR truncated category in 2017



The relationship between the ATAR and ATAR-eligible percentile in 2017 is shown in Figure 3.2.

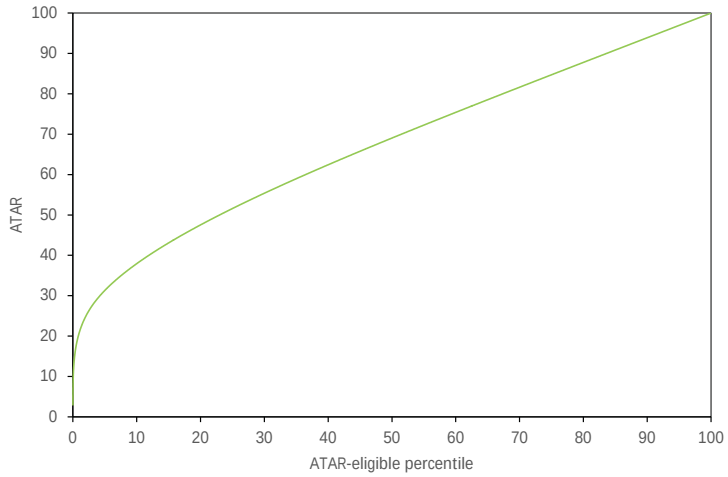


Figure 3.2 The relationship between ATAR and ATAR-eligible percentile in 2017

The relationship between aggregates and ATARs in 2017 is shown graphically in Figure 3.3.

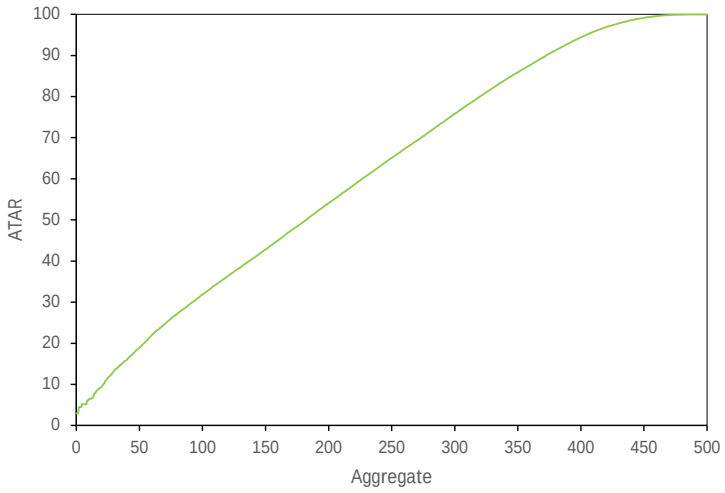


Figure 3.3 Relationship between aggregate and ATAR in 2017

Each ATAR corresponds to a range of aggregate marks. The range of aggregates corresponding to one ATAR is greatest in the extremes of the distribution of aggregates and smallest near the middle of the distribution of aggregates. Table 3.2 gives ATARs for selected aggregates based on the 2017 data.

Table 3.2 Relationship between aggregate and ATAR in 2017

Aggregate	ATAR
450.0	99.15
400.0	94.40
350.0	85.95
300.0	75.80
250.0	65.10
200.0	54.05
150.0	42.80

4 THE HSC AND ATAR IN 2017 – SOME RESULTS

4.1 OVERVIEW

In 2017, some language courses, formerly known as "heritage", have been renamed to "in Context". These included Chinese in Context, Indonesian in Context, Japanese in Context and Korean in Context. Courses formerly known as "background speakers" courses were renamed as "and Literature". These were Chinese and Literature, Indonesian and Literature, Japanese and Literature and Korean and Literature. Korean beginners was reintroduced as a course. The Malay Background Speakers and Dutch courses were available in 2017 but attracted no students.

A total of 76,827 students completed at least one HSC course in 2017, but 4,119 were removed from the database as they completed no ATAR course. Of the remaining pool of 72,708 students, 90.6 per cent received an HSC and 78.5 per cent received an ATAR. Only 8 students who received an ATAR did not receive the HSC award. While courses contributing to the underlying aggregate may be accumulated over a five-year period, 93.4 per cent of those receiving an ATAR in 2017 included only 2017 courses in their aggregate.

The percentage of students enrolled in at least one ATAR course who were female (52.3%) was higher than the previous year, as was the percentage of students who received an ATAR who were female (53.7%).

4.2 PERCENTAGE OF STUDENTS RECEIVING AN ATAR

HSC students who do not receive an ATAR fall into one of two broad groups:

- Those who are studying less than 10 units. These include private study students who enrol in one or two courses, mature age students who are studying a limited HSC program and students who are accumulating their HSC over two or more years.
- Those who enrol in a full HSC program which does not satisfy the requirements for an ATAR. These students normally complete six or eight units of Board Developed courses, and choose the remaining units from Board Endorsed courses. They receive an HSC but not an ATAR. In 2017 there were 8,822 such students.

Table 4.1 Proportion of students receiving an ATAR, 2013–2017

Year	HSC candidature	Students receiving an ATAR	
		Number	%
2013	70,686	54,642	77.3
2014	71,706	55,482	77.4
2015	72,238	55,736	77.2
2016	72,014	55,956	77.7
2017	72,708	57,061	78.5

4.3 NUMBER OF UNITS OF ATAR COURSES COMPLETED

The pattern in 2017 was similar to that observed in 2016, with 46.3 per cent completing exactly 10 ATAR units and 31.6 per cent completing more than the required minimum number of ATAR units (Table 4.2).

Table 4.2 Percentage of students completing specified numbers of units[1] of ATAR courses, 2014–2017

Number of units	2014 %	2015 %	2016 %	2017	
				%	Number
1	0.4	0.5	0.5	0.5	353
2	7.0	7.6	7.3	7.4	5,350
3	0.5	0.5	0.6	0.6	428
4	5.0	5.3	5.1	4.9	3,591
5	0.2	0.1	0.1	0.1	93
6	5.3	5.1	5.2	4.8	3,502
7	0.2	0.2	0.1	0.1	68
8	3.5	3.2	3.0	2.8	2,021
9	0.2	0.2	0.1	0.1	81
10	44.6	45.6	46.3	47.1	34,225
11	17.9	17.2	17.3	17.2	12,523
12	13.3	12.8	12.6	12.7	9,219
13	1.5	1.3	1.4	1.3	978
14	0.3	0.3	0.3	0.3	237
15+	0.1	0.1	0.1	0.1	39
HSC cohort	**71,706**	**72,238**	**72,014**		**72,708**

[1] *The units include current year units and units accumulated in previous years.*

4.4 COURSE ENROLMENTS – TABLE A1

Table A1 in the Appendix provides for each course the size of the candidature, the number who received an HSC in 2017, the number who received an ATAR in 2017, the percentage of females and the maximum ATAR gained by a student enrolled in that course. The table includes students who completed the course in 2017 as well as those who completed the course in previous years and completed at least one ATAR course in 2017. The table excludes courses where there were less than 10 students.

What is clear is that in almost all courses some students gained an ATAR in excess of 95.00, and for the majority of courses the maximum ATAR is higher.

In Table A6 we have included a column showing for each course the maximum ATAR of any student doing the course in any year and including all units from that course in the ATAR calculation. For the vast majority of courses, the values for the maximum ATAR in Tables A1 and A6 agree.

The pattern of 'male-dominated' and 'female dominated' courses was similar to the pattern exhibited previously. Female students were in the majority in languages, creative arts and the humanities, while males were in the majority in technology and computing courses.

A total of 19,761 students enrolled in at least one VET course, of which 12,963 students enrolled in a VET examination course. The proportion taking a VET examination course (65.6%) is lower than the corresponding proportion for 2016 (66.1%).

Overall, 78.5 per cent of the 2017 HSC cohort received ATARs but the percentage varied across courses, from 47.6 per cent to 99.5 per cent for Category A courses with candidatures exceeding 100. For students enrolled in any VET courses, the overall figure was 52.6 per cent but was higher, 79.5 per cent, for students enrolled in VET examination courses.

4.5 DISTRIBUTIONS OF HSC MARKS – TABLE A2

Table A2 in the Appendix shows the distributions of HSC marks in 2017. For each course the percentage of students in Bands 2 to 6 are given, together with the median HSC mark and the Band in which the median lies. Data are not provided for courses with less than 10 students.

Since the introduction of standards referenced reporting in 2001, marks reported to students have not been constrained to a set distribution. Students demonstrating the highest level of achievement in a 2-unit course are placed in Band 6 and receive HSC marks of 90 and above. The data show clearly that patterns of HSC marks vary across courses.

There are few students in Band 1. For most 2-unit courses the median HSC mark lies in Band 4.

Comparison of Table A2 with the corresponding table in 2016 shows that distribution of HSC marks has changed for some courses (see section 5.1.)

4.6 DESCRIPTIVE STATISTICS OF HSC AND SCALED MARKS – TABLE A3

Table A3 in the Appendix presents, for each course, descriptive statistics and the 99th, 90th, 75th, 50th and 25th percentiles for HSC and scaled marks. Data is not provided for courses with less than 10 students. Percentiles are not included for courses with less than 40 students.

Although HSC marks are not used as the basis for scaling they are shown in Table A3 because raw marks are not released to students or teachers and hence cannot be presented in this report. Scaled marks are generally lower than HSC marks: few students receive HSC marks less than 25 (on a one-unit basis) whereas the average scaled mark for the total HSC candidature is approximately 25.

In the table, marks are shown on a one-unit basis, so the range is 0 to 50. The percentiles in a course are based on all students completing that course in 2017 irrespective of whether they were eligible for an ATAR or not.

When reading the table, it must be remembered that an HSC mark indicates a standard reached whereas a scaled mark reflects the position a student would have obtained in the course candidature had all students completed that course. Because HSC marks and scaled marks serve different purposes, comparing HSC and scaled marks is of little value and can lead to misinterpretations that may adversely affect student choices of courses to study.

Table A3 should not be used as a simple HSC to scaled mark conversion table for reasons explained below.

NESA reports HSC marks rounded to the nearest integer whereas raw marks are calculated to one decimal place. NESA aligns the raw marks to bands that best describe the standards that the students achieve. This can compress a range of raw marks to a smaller number of HSC marks. For example, all Band E4 performances in an Extension course (except for Mathematics Extension 2) are allocated one of the six integer grades 45.0 to 50.0. Thus after aligning and rounding, for each HSC mark there can be a range of raw marks and hence a range of scaled marks. There is, in general, no unique scaled mark for an HSC mark.

A given HSC mark often corresponds to a range of raw and scaled marks and hence to a range of percentiles. Table A3 gives the HSC mark at the specified percentile. Not all students with that HSC mark will be at that percentile when the raw marks are considered. For example, in History Extension the HSC mark at the 90th percentile was 46.0. Students with a History Extension HSC mark of 46.0 in fact corresponded to the scaled mark percentile range 83.0 to 92.0.

The scaled marks reported in Table A3 are the scaled marks at the specified percentiles. The 90th percentile of the scaled mark distribution in History Extension was 42.0 but there was a range of scaled marks achieved by those with an HSC mark of 46.0.

Looking at Music Extension in Table A3 we see that the 99th and 90th percentiles of the HSC distribution are both 50.0 whereas the scaled marks at the corresponding percentiles are 50.0 and 48.3. This illustrates that there is not a unique scaled mark corresponding to a given HSC mark.

The primary purpose of Table A3 is to show the relativities between courses. For example, Table 4.3 shows the scaled marks corresponding to the 90th and 50th percentiles for English Extension 2, Mathematics General 2 and Music 1.

Table 4.3 Scaled marks for selected percentiles

Course	Scaled mean	Scaled mark for	
		P_{90}	P_{50}
English Extension 2	35.5	45.0	35.8
Mathematics General 2	21.7	36.3	21.3
Music 1	21.5	36.2	21.1

Mathematics General 2 and Music 1 have similar scaled means and the similar scaled marks corresponding to the 90th percentile. English Extension 2 has a higher scaled mean and higher scaled marks at corresponding percentiles. The table shows that the students who are at the 90th percentile of the Mathematics General 2 and Music 1 candidatures have similar scaled marks for those courses to the middle candidate in English Extension 2.

4.7 DISTRIBUTION OF ATARS – TABLE A7

Table A7 in the Appendix shows the distribution of ATARs. ATARs are not evenly distributed. For most ATARs the number of students on that ATAR lies between 20 and 50. The number of students on an ATAR is less for lower ATARs.

An ATAR of 99.00 does not represent the top 1 per cent of the ATAR cohort; 1.6 per cent of the 2017 ATAR cohort actually gained an ATAR of 99.00 or above. It does, however, represent the level of achievement necessary to be in the top 1 per cent of the 2011 Year 7 cohort if all those students continued to Year 12 and had been eligible for an ATAR in 2017. From Table 4.4 we see that in 2017 16.4 per cent of the ATAR-eligible students received an ATAR of 90.00 or above and 32.7 per cent gained an ATAR of 80.00 and above.

Table 4.4 Percentage of ATAR students receiving specific ATARs and above, 2013–2017

ATAR	2013 %	2014 %	2015 %	2016 %	2017 %
99.00	1.7	1.7	1.7	1.7	1.6
95.00	8.4	8.3	8.3	8.3	8.2
90.00	16.7	16.5	16.5	16.5	16.4
80.00	33.1	32.8	32.7	32.6	32.7
70.00	48.9	48.4	48.1	48.0	48.5
60.00	63.3	63.0	62.4	62.3	63.5
50.00	75.9	75.8	74.8	74.7	77.0

Table 4.5 Median ATAR, 2013–2017

Year	Median ATAR all students	Median ATAR female	Median ATAR male
2013	69.20	71.00	67.00
2014	68.95	70.30	67.20
2015	68.70	70.75	66.35
2016	68.65	70.45	66.55
2017	69.00	70.15	67.65

Table 4.5 shows the median ATAR and the median ATAR for male and female candidates for the years 2013–2017.

In 2017, 46 students received the top ATAR of 99.95. They comprised 24 males and 22 females from a mix of government and independent schools.

4.8 ATAR PERCENTILES AND RELATIONSHIP BETWEEN ATAR AND AGGREGATES – TABLES A8, A9

Table A8 in the Appendix shows the ATAR corresponding to selected ATAR-eligible percentiles. For example, 10 per cent of the ATAR cohort in 2017 received an ATAR of 93.95 or above.

Each ATAR corresponds to a range of aggregates and the figures provided in Table A9 in the Appendix show the minimum aggregate corresponding to selected ATARs.

4.9 GENDER DIFFERENCES

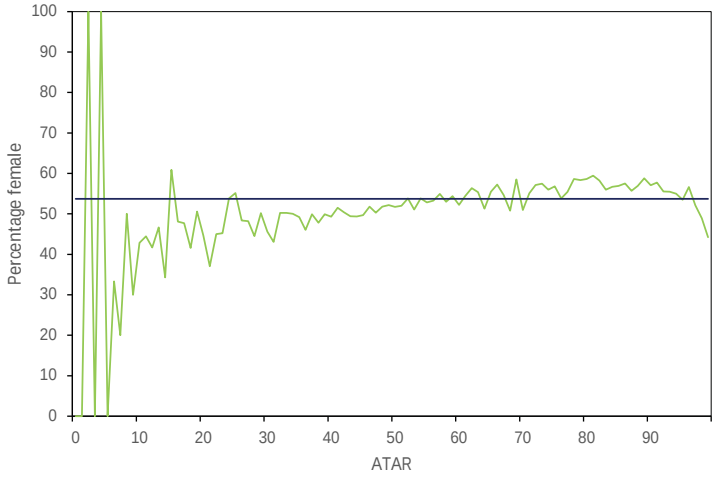
As in previous years, female students outperformed male students in the majority of courses and had a higher median ATAR. The percentages of students receiving ATARs on or above specified values who were female are given in Table 4.6.

Table 4.6 Percentage of students receiving ATARs on or above specified values who were female, 2013–2017

ATAR	2013 % female	2014 % female	2015 % female	2016 % female	2017 % female
99.00	50.3	46.5	50.2	45.9	44.2
98.00	52.0	48.3	52.1	47.2	46.6
95.00	54.0	51.3	54.1	52.2	51.1
90.00	55.8	53.8	56.2	54.4	53.6
80.00	56.9	55.2	57.1	56.7	55.5
70.00	56.6	55.4	56.4	56.3	55.7
60.00	56.0	55.2	55.5	55.5	55.4
50.00	55.2	54.7	54.9	54.8	55.0
40.00	54.5	54.2	54.3	54.3	54.5
30.00	54.1	53.7	53.8	53.9	54.0
Total cohort	**53.5**	**53.1**	**53.0**	**53.3**	**53.7**

Figure 4.1 shows the percentage of students on each ATAR who were female. For this graph the ATARs have been truncated, so that an ATAR of 90, for example, includes ATARs from 90.00 to 90.95. Overall 53.3 per cent of the ATAR cohort was female, which is represented by the horizontal line on the graph. The graph shows clearly that there were proportionally more females on ATARs above 70.00 than males.

Figure 4.1 Percentage of students on each ATAR who were female



The vast majority of students who completed the 2017 NSW Higher School Certificate were in Year 7 in 2012. The following table reveals that there are substantial gender differences in the proportions of students from the 2012 NSW Year 7 school cohort who subsequently went on to receive an HSC award or ATAR in 2017.

Comparison with the equivalent figures for the 2015 HSC shows that gender difference in the proportion of the corresponding Year 7 cohort becoming eligible for an ATAR has increased.

Table 4.7 Percentage of male and female in 2012 Year 7, receiving an HSC Award or eligible for an ATAR in 2017

	Number total	% of total 2012 Year 7 cohort	Number female	% of 2012 female Year 7 cohort	Number male	% of 2012 male Year 7 cohort
Year 7 2012[1]	87,088		42,842		44,246	
Eligible for HSC award 2017	65,875	75.6	34,682	81.0	31,193	70.5
Eligible for ATAR 2017	57,061	65.5	30,650	71.5	26,411	59.7

[1] *Schools, Australia 2017 (ABS 4221.0).*

4.10 UNIVERSITY OFFERS

UAC makes several rounds of offers for semester 1 courses, starting from August and going through to February. The majority of offers to Year 12 students are made in December and January.

Of the 57,061 students who received an ATAR in 2017, 77.4 per cent applied through UAC for a university course. The table below shows that the higher the ATAR, the greater the percentage of students applying for university through UAC.

Table 4.8 Applicants for university places by ATAR – domestic and international

ATAR band	Total number of students	Applicants	
		Number	Percentage[1]
90.00 – 99.95	9,349	9,222	98.6
80.00 – 89.95	9,286	8,837	95.2
70.00 – 79.95	9,051	8,172	90.3
60.00 – 69.95	8,574	7,053	82.3
50.00 – 59.95	7,680	5,339	69.5
Below 50.00	13,121	5,553	42.3
Total	**57,061**	**44,176**	**77.4**

[1] *These are percentages of the total number of students in the given ATAR band.*

Of those domestic students applying through UAC for undergraduate courses in semester 1, 94.4 per cent were made at least one offer of a place. Of these applicants receiving at least one offer, 62.8 per cent had an ATAR of 70 and above, and 90.3 per cent had an ATAR of 50 and above.

It is important to note that not all applicants are made an offer solely on the basis of their ATAR. For some courses, alternative criteria are used and ATARs are not considered at all, and for other courses ATARs are supplemented by additional criteria.

5 TRENDS AND OTHER ISSUES

5.1 VARIATION IN PATTERNS OF HSC MARKS – TABLES A4, A5

As noted in Chapter 3, the scaling process uses the raw marks, not the HSC marks that NESA uses to report student achievement. Further the raw marks for each course undergo an initial standardisation to a common mean and standard deviation before the scaling algorithm is implemented. The HSC marks that NESA uses to report student achievement are not used in the scaling process so any variation in the distribution of these marks across courses does not impact on the ATAR calculation.

A common question is whether changes in the pattern of HSC marks from one year to the next affects the pattern of scaled marks and hence the pattern of ATARs. For the reason given above, the answer is no. It is to be expected that the patterns of HSC marks may change from year to year, reflecting differences in student achievement against the published standards in individual courses. In contrast, one would expect to see differences in the patterns of scaled marks only if the overall academic quality of a course candidature changed.

Tables A4 and A5 in the Appendix show the distributions of HSC and scaled marks, respectively, in 2017 and 2016. The marks are on a per-unit basis (0–50) and courses with less than 40 students in either year are not included. Table A4 shows the percentages of each course candidature with an HSC mark less than 45, 40, 35, 30 and 25 for 2017 and 2016. Table A5 provides similar information for scaled marks. The data show that while the distributions of HSC marks have changed for some courses, the distributions of scaled marks were generally the same.

Studies of Religion I is an example of a course where the candidature was almost the same as in 2016 but there is a change in the distribution of HSC marks (Table 5.1). The distributions of scaled marks in the two years were, however, similar.

Table 5.1 Distributions of HSC and scaled marks for Studies of Religion I, 2016 and 2017, on a one-unit basis

Mark	Year	Number	Percentage of students with mark less than:				
			45	40	35	30	25
HSC mark	2017	9,011	84.5	50.0	17.8	4.3	0.5
	2016	8,926	86.5	49.9	23.9	5.1	0.8
Scaled mark	2016	9,011	99.4	92.7	76.3	56.2	36.3
	2015	8,926	99.4	92.1	76.2	55.9	36.6

Taken together, the data indicate that the 2017 candidature in Studies of Religion I performed better than the corresponding cohort in 2016 in terms of the performance standards for Studies of Religion I. However, their overall performance as judged by their scaled marks is almost exactly the same.

5.2 DISTRIBUTIONS OF ENGLISH AND MATHEMATICS MARKS, 2014-2017

Because all students study English, and most study Mathematics, comparative data is shown for English and Mathematics courses for the four years, 2014 to 2017. Table 5.4 shows the distributions of HSC marks and Table 5.5 shows the distributions of scaled marks.

Compared to 2016, there were slightly more students completing English Extension 1 and English Extension 2 in 2017. This increase came after six consecutive years of decline in the candidature doing this combination of English courses. By comparison, the number of students completing the non-ATAR course English Studies is growing. In 2017 there were 6,720 candidates who completed English Studies. These students were not ATAR eligible.

In 2017, 16.3 per cent of ATAR eligible students did not complete a mathematics course and 23.2 per cent of those awarded an HSC did not include a Board developed mathematics course in their Year 12 HSC subjects.

When considering the English marks, recall English Standard and English Advanced are scaled as a single group.

- In 2 unit English, all students complete a common paper (Paper 1) which counts for 40 per cent of the total mark. Advanced and Standard students then complete separate papers that count for 60 per cent of the total mark.
- NESA uses Paper 1 to place the marks of the separate Standard and Advanced papers on the same scale so that a total (raw) examination mark can be calculated for 2 unit English. The marks for Standard and Advanced students are deemed to be on the same scale.
- NESA moderates school assessments using these raw examination marks.
- The raw HSC marks which are used for scaling are then calculated.
- The raw HSC marks for the English Standard and Advanced students are combined and scaled as a single course. A given raw HSC mark yields the same scaled mark for Standard and Advanced students.

By contrast, the courses Mathematics General 2 and Mathematics are distinct 2-unit courses. They have no assessment components in common and so they are scaled as separate courses. The performance band information for 2 unit only students on the Mathematics course, corresponding to Table A2, is given in Table 5.2, and the information captured in Table A3 is provided in Table 5.3 for this group of candidates.

Table 5.2 Distributions of HSC marks for Mathematics 2 unit only candidates

Course	Number	Median HSC mark	Median band	Percentage of students in Performance Band				
				6	5	4	3	2
Mathematics – 2 unit only	11,589	75	4	11	27	27	22	9

Table 5.3 Descriptive statistics for of HSC and scaled marks for Mathematics 2 unit only candidates

Course	Number	Type of mark	Mean	SD	Max. mark	P99	P90	P75	P50	P25
Mathematics – 2 unit only	11,589	HSC	37.0	7.1	50.0	49.0	45.0	42.0	37.5	33.0
		scaled	27.8	9.9	50.0	47.3	40.0	34.9	28.8	21.9

Table 5.4 Distributions of HSC marks for English and Mathematics courses, 2014–2017

	Year	Enrolment	Percentage of students with HSC mark less than:				
			45	40	35	30	25
English Standard	2017	30,913	99.1	84.0	44.9	13.7	4.2
	2016	31,290	99.1	86.5	50.5	12.7	2.8
	2015	31,501	99.6	91.6	57.6	15.3	3.3
	2014	31,483	99.7	91.8	56.5	14.3	2.8
English Advanced	2017	26,779	84.8	36.3	8.2	1.4	0.4
	2016	26,080	84.6	38.0	9.5	1.1	0.2
	2015	26,002	84.6	42.1	8.8	0.9	0.2
	2014	26,729	85.3	40.6	8.4	0.8	0.2
English Extension 1	2017	4,333	70.0	26.3	6.5	1.6	0.7
	2016	4,354	64.6	21.7	4.8	1.0	0.2
	2015	4,512	65.4	22.5	5.7	0.9	0.2
	2014	4,848	69.4	29.3	6.8	1.1	0.3
English Extension 2	2017	1,672	79.4	51.9	22.4	3.9	0.4
	2016	1,619	81.8	51.4	20.4	5.1	0.6
	2015	1,631	73.8	42.8	17.5	4.0	0.3
	2014	1,776	76.8	49.2	22.5	6.8	1.7
ESL	2017	2,336	94.7	74.5	44.0	17.5	6.9
	2016	2,327	95.3	72.7	40.7	15.7	6.2
	2015	2,368	96.0	73.7	38.8	16.5	4.1
	2014	2,291	95.5	71.4	33.8	10.4	2.1
Mathematics General 2	2017	31,543	93.1	74.2	49.3	25.4	8.4
	2016	31,758	94.6	74.1	47.9	24.3	8.3
	2015	31,511	94.3	74.1	49.5	25.1	7.5
	2014	31,321	94.5	74.7	48.7	24.0	6.4
Mathematics	2017	17,060	76.4	46.3	24.8	9.1	2.9
	2016	16,139	76.8	47.3	23.4	7.8	3.5
	2015	16,450	80.3	47.5	19.1	9.2	3.1
	2014	16,693	78.2	46.1	18.3	8.5	3.5
Mathematics Extension 1	2017	8,770	61.8	36.3	18.1	8.2	2.6
	2016	8,671	66.9	40.7	20.4	8.3	2.8
	2015	8,954	65.6	35.8	15.7	6.0	1.7
	2014	9,022	69.6	36.8	15.4	5.8	1.9
Mathematics Extension 2	2017	3,223	66.4	36.1	15.9	6.2	2.4
	2016	3,251	67.9	35.9	14.5	5.7	2.0
	2015	3,333	63.9	31.7	13.7	5.0	1.5
	2014	3,371	68.5	35.2	13.5	5.0	1.3

Table 5.5 Distributions of scaled marks for English and Mathematics courses, 2014–2017

	Year	Enrolment	Percentage of students with scaled mark less than:					
			45	40	35	30	25	20
English Standard	2017	30,913	99.9	99.0	94.8	86.0	71.1	50.8
	2016	31,290	99.9	99.0	95.3	87.0	71.8	51.4
	2015	31,501	99.9	99.5	96.9	89.2	74.9	54.3
	2014	31,483	99.9	99.6	97.2	90.0	75.9	55.8
English Advanced	2017	26,779	97.4	83.3	61.6	39.7	22.1	10.5
	2016	26,080	98.0	83.4	60.6	38.7	21.4	9.9
	2015	26,002	96.8	82.4	60.1	36.9	18.4	7.6
	2014	26,729	97.6	83.4	60.3	37.1	19.2	8.1
English Extension 1	2017	4,333	95.5	71.4	38.6	17.1	5.7	2.1
	2016	4,354	94.4	67.4	37.3	17.0	6.3	2.3
	2015	4,512	92.6	64.0	33.2	15.7	6.3	2.5
	2014	4,848	92.8	67.1	38.3	17.4	6.1	1.9
English Extension 2	2017	1,672	90.7	71.0	45.5	24.0	7.1	1.3
	2016	1,619	91.0	70.9	43.8	21.2	8.5	2.5
	2015	1,631	89.8	66.2	39.2	18.4	7.0	1.9
	2014	1,776	90.0	68.8	41.6	20.0	8.2	2.2
ESL	2017	2,336	98.4	92.8	84.5	72.5	58.9	44.2
	2016	2,327	98.9	94.2	85.3	74.0	59.8	46.1
	2015	2,368	98.6	93.8	85.6	75.0	60.5	45.7
	2014	2,291	98.3	93.6	85.0	73.9	59.7	44.8
Mathematics General 2	2017	31,543	99.9	96.4	87.4	74.8	60.9	45.8
	2016	31,758	99.9	97.2	87.7	74.1	59.5	44.4
	2015	31,511	99.9	96.9	87.8	75.5	61.5	46.4
	2014	31,321	99.9	97.5	88.4	75.4	60.9	45.6
Mathematics	2017	17,060	94.0	78.7	60.0	41.1	25.3	14.6
	2016	16,139	95.8	80.1	59.1	39.5	24.1	13.6
	2015	16,450	95.0	80.4	59.4	39.2	23.6	14.1
	2014	16,693	95.3	78.4	59.0	40.4	25.3	14.5
Mathematics Extension 1	2017	8,770	77.5	48.6	24.0	10.1	3.4	1.0
	2016	8,671	76.5	44.1	22.0	10.4	4.3	1.7
	2015	8,954	80.1	48.3	24.0	10.2	4.2	1.4
	2014	9,022	81.6	47.3	21.9	9.3	3.9	1.6
Mathematics Extension 2	2017	3,223	60.1	17.4	5.2	2.0	1.0	0.4
	2016	3,251	50.3	14.7	4.9	1.8	1.0	0.5
	2015	3,333	61.6	19.8	6.8	2.4	0.8	0.2
	2014	3,371	63.9	18.2	5.6	1.8	0.6	0.3

5.3 COURSES THAT CONTRIBUTE TO THE ATAR – TABLE A6

If students complete only 10 units all courses must be counted in the calculation of the ATAR, whereas if students complete more than 10 units at least one unit will be omitted. In 2017 34,083 students out of the 57,061 ATAR eligible students (59.7%) presented exactly 10 units.

Table A6 in the Appendix provides some information about students who completed more than 10 units. Data are not provided for courses with less than 10 students.

For each course:

- The first column shows the total number of students who did the course in any year and received an ATAR in 2017.
- The second column shows the number of these students who completed more than 10 units.
- The third column expresses this number as a percentage.
- The fourth column gives the percentage of these students who counted all units of that course towards their ATAR. The percentage is based on the number of students in the course who had completed more than 10 units.
- The final column shows the maximum ATAR of any student doing the course in any year and including all units of that course in the ATAR calculation.

Of the 106 courses listed in Table A6, 69 have 70 per cent or more of their students counting the course. The data also show that, while there are differences in the percentages of students who count a particular course towards their ATARs, there is no evidence of systematic differences across Key Learning Areas.

6 FREQUENTLY ASKED QUESTIONS

In recent years most of the enquiries from students received by the ATAR Enquiry Centre at UAC concerned the relationship between their HSC marks and their ATARs, and the reason why one course contributed to their ATAR and not another. These two major enquiries will be discussed below, followed by a summary of some of the other frequently asked questions.

6.1 WHY IS MY ATAR LOW IN COMPARISON TO MY HSC MARKS?

The ATAR is a rank, not a mark, and so there is no reason why the scores should be close. From Table A2 we can see that the median HSC mark for most 2-unit courses is between 70 and 80. The median ATAR is 69.00 which is lower than the median score for almost all courses. So for students in the middle of the candidature, the ATAR will typically be lower than their average HSC mark.

There is, however, no simple rule to convert HSC marks to ATARs. Courses are unlikely to have the same scaled means from year to year and the pattern of HSC marks varies across courses so that the same HSC mark does not necessarily indicate the same position across courses. The following examples illustrate the complexity of the relationship between HSC marks and ATARs.

Example 1

Consider the following two students, Liam and Kellie, whose HSC marks are shown in Table 6.1. These students are middle students (the 50th percentile) in all of their courses. Their average HSC marks per unit are almost the same, 38.8 and 39.1 respectively, but their ATARs are quite different, 54.30 and 80.75 respectively.

Table 6.1 Two examples of student achievement to show the effect of different scaled means

Liam			
ATAR	Course	HSC mark per course	HSC mark per unit
54.30	Dance	79	39.5
	English Standard	70	35.0
	Music 1	82	41.0
	Society & Culture	78	39.0
	Visual Arts	79	39.5

Kellie			
ATAR	Course	HSC mark per course	HSC mark per unit
80.75	Chemistry	76	38.0
	Economics	78	39.0
	English Advanced	82	41.0
	Mathematics	81	40.5
	Physics	74	37.0

Both Liam and Kellie are at the 50th percentile in all of their courses, so the reason for the difference in their ATARs is the difference in the strength of the competition in the courses they have chosen. The average scaled mean for Liam's courses was 22.1, whereas the average scaled mean for Kellie's courses was 31.3. Since the mean scaled mark and the median scaled mark are generally very similar, Kellie's aggregate is close to 313, while Liam's aggregate is close to 221, reflecting the difference in the academic achievement of the students they have competed against. Consequently, Kellie's ATAR is significantly higher than Liam's ATAR.

Example 2

Consider the following two students, James and Amy, whose HSC marks are shown in Table 6.2. Their average HSC marks per unit are identical at 38.2, but their ATARs are quite different, 65.00 and 75.00 respectively.

Table 6.2 Two examples of student achievement to show the effect of different scaled means

James			
ATAR	Course	HSC mark per course	HSC mark per unit
65.00	Agriculture	77	38.5
	English Standard	79	39.5
	Industrial Technology	77	38.5
	Mathematics General 2	71	35.5
	Society & Culture	78	39.0

Amy			
ATAR	Course	HSC mark per course	HSC mark per unit
75.00	Biology	79	39.5
	Chemistry	76	38.0
	English Advanced	76	38.0
	Mathematics	77	38.5
	German Continuers	74	37.0

Amy has an ATAR that is almost the same as her average HSC course score (76.4) whereas James's ATAR is much lower than his average HSC course score (76.4). If we look at Table A3, the average of the scaled means of the courses taken by James is 20.2, whereas for the average scaled mean for the courses taken by Amy is 30.5.

Example 3

Consider the following two students who completed the same courses. The first student, Fred, receives an HSC mark of 35.0 per unit in each course, while the second student, Laura, receives an HSC mark of 40.0 per unit in each course (Table 6.3).

Table 6.3 Two examples of student achievement: Fred and Laura

Course	Fred		Laura	
	HSC mark per unit	Percentile	HSC mark per unit	Percentile
Biology	35.0	34	40.0	67
Business Studies	35.0	37	40.0	69
English Advanced	35.0	10	40.0	41
Mathematics	35.0	26	40.0	49
Modern History	35.0	31	40.0	64
Visual Arts	35.0	12	40.0	50
ATAR	**57.55**		**78.05**	

Their HSC marks per unit in each course differ by only 5, yet their ATARs differ by 20.5. Laura's ATAR is similar to her HSC course marks (80 per course), while Fred's ATAR is much lower than his HSC course marks (70 per course).

The reason for the large difference in the ATARs can be found in the differences in the percentiles shown in Table 6.3. The percentiles are much higher for Laura than for Fred. Given these large differences, it is not surprising that their ATARs are very different.

The courses and HSC marks shown for Fred and Laura are the same as in 2016. While their HSC marks are the same the percentiles (their positions in their courses) have changed because of the changes in the distributions of HSC marks, so their ATARs are different. Table 6.4 presents the ATARs for 2009 to 2017.

Table 6.4 ATARs for Fred and Laura, 2009–2017

Year	Fred	Laura
2009	57.80	81.20
2010	57.05	80.15
2011	58.20	79.80
2012	57.45	79.65
2013	57.55	80.00
2014	55.95	79.45
2015	57.50	79.65
2016	57.10	78.50
2017	57.55	78.05

The ATAR is about position, whereas HSC marks indicate levels of achievement in individual courses.

6.2 WHY DOES THIS COURSE CONTRIBUTE TO MY ATAR WHEN ANOTHER COURSE WHERE I RECEIVED A HIGHER MARK DOES NOT COUNT?

As in previous years, this question arose after the results were released because each student is advised which units contribute to their ATAR. The question is not always easy to answer, especially as students are only aware of their HSC marks, which provide little information as to their rankings in their courses.

The question can often be answered by reference to data on the distributions of HSC and scaled marks in Table A3 in the Appendix. Some examples are presented to illustrate the principles involved.

The examples illustrate the general principle that a student's position in their course and the scaled means and standard deviations of their courses are all important in determining which of their courses contribute towards their ATAR.

Also, it must be remembered that a given HSC mark usually corresponds to a range of raw and scaled marks.

Example 1 – Scaled means

The first example (Table 6.5) shows a set of HSC and scaled marks corresponding to results at the 90th percentile of the various course distributions.

Table 6.5 HSC and scaled marks – example 1

Course	Number	Scaled mean	Scaled SD	P_{90}	
				HSC mark per unit	Scaled mark
Ancient History	8,834	23.8	11.0	44.5	38.4
Biology	18,152	26.2	10.3	45.0	40.0
Business Studies	17,469	24.1	10.8	44.5	38.5
PDH&PE	15,679	22.7	10.6	44.5	37.3
Physics	9,573	30.5	9.9	45.0	42.4

These HSC marks are similar and each is at the 90th percentile of a large course with comparable standard deviations. Since the position within the course candidature is the same for each course the scaled mark will depend on the academic quality of the candidature of the course concerned. The highest scaled mark is for Physics, which has the highest scaled mean. The lowest scaled mark is for PDH&PE, which has the lowest scaled mean.

Example 2 – Position

Consider students with HSC marks of 47.0 per unit in Business Studies and Mathematics. The student in Business Studies is at the 99th percentile and gains a scaled mark of 45.0, whereas the student in Mathematics is at the 90th percentile and gets a scaled mark of 42.8. Therefore, even though the scaled mean for Mathematics (31.3) is much higher than the scaled mean for Business Studies (24.1), the difference in position compensates for this and the Business Studies student gets the higher scaled mark.

Table 6.6 HSC and scaled marks – example 2

	Scaled mean	Scaled SD	Percentile	HSC mark per unit	Scaled mark
Business Studies	24.1	10.8	P99	47.0	44.9
Mathematics	31.2	10.2	P90	47.0	43.4

Example 3 – Standard deviations

In some situations, particularly in courses with smaller candidatures, the difference in the distribution spread is also a factor in deciding which course contributes towards the ATAR.

Table 6.7 HSC and scaled marks – example 3

			P_{90}	
Course	Scaled mean	Scaled SD	HSC mark per unit	Scaled mark
Music 1	21.5	10.6	46.0	36.2
Arabic Extension	23.4	7.3	46.0	32.7

Consider students at the 90th percentile of Music 1 with HSC mark 46.0 per unit and scaled mark of 36.2 per unit and at the 90th percentile of Arabic Extension with HSC mark of 46.0 and scaled mark of 32.7. Arabic Extension has scaled mean of 23.4 whereas Music 1 has scaled mean 21.5.

The course with the lower scaled mean has the higher scaled mark corresponding to the HSC mark of 46.0 even though the position is the same in both courses. The reason the scaled marks differ is the spread in the distribution as measured by the standard deviation (SD). Arabic Extension has SD 7.3 but Music 1 has SD 10.6. Music 1 has a candidature with more varied academic ability than Arabic Extension.

Example 4 – Raw versus HSC marks

As noted in section 4.6, there is not necessarily a unique scaled mark for each HSC mark. From Table A3, by focusing on the maximum mark and the 99th percentile, we see that candidates receiving the top HSC mark of 50 in Mathematics Extension 1 received scaled marks from 50.0 to 49.5. The top HSC mark in a course does not necessarily reflect the top raw mark in a course and so a candidate with HSC mark of 50 may not receive the top scaled mark.

The pattern of several scaled marks corresponding to a given HSC mark can occur across the distribution, not just at the top of the range.

6.3 OTHER FREQUENTLY ASKED QUESTIONS

Does the school I attend matter?

No. The school attended does not feature in the ATAR calculation. The ATAR calculation is based only on marks provided by NESA; no other information is used.

Does my postcode matter?

No.

Are certain courses always 'scaled down'?

No. Scaling is carried out afresh each year: if the quality of the candidature changes, the scaled mean will also change.

Is it true that if I study this course I can't get a high ATAR?

No. As Table A1 in the Appendix shows, there are students in every course who achieve high ATARs.

What impact did the variation in patterns of HSC marks have on the ATAR calculations?

None. It is the raw HSC marks rather than the aligned HSC marks that are scaled. The fact that the percentage of students who are placed in Performance Band 6 differs across courses has no effect on the calculation of the ATAR.

Why can't I use my HSC marks to check the calculation of my ATAR?

There are two reasons. The first is the ATAR is a rank that indicates your position in relation to other students, it is not an average mark. Secondly, raw marks are used in the calculation of the ATAR, not the aligned HSC marks.

Can I find out what my scaled marks are?

No. Scaled marks are not reported to students. They are determined during an interim phase in the ATAR calculation.

I have similar HSC marks to my friend, but we don't have similar ATARs. Why not?

Your ATARs would be similar if your courses were the same.

Which course should I study?

Do not choose courses on the basis of what you believe are the likely effects of scaling. Choice of which courses to study should be determined only by your interests, your demonstrated abilities and the value of courses for your future career plans. The scaling process is designed to allow students to choose according to these principles and not, as far as university selection is concerned, be disadvantaged by their choice. It treats all students on their merits.

Do I get a better ATAR if I study more units?

This is a common question. While the data show that students who study more units tend to gain higher ATARs, determining causality is difficult. The relationship between the number of units studied and ATAR might result from personal attributes including interest, motivation, effort and time management. You cannot assume that simply by studying more units your ATAR will be increased.

What happens if I repeat a course?

If a course is repeated only the last satisfactory attempt is used towards the calculation of the ATAR. Your aggregate will be re-calculated using your new mark. Your aggregate may increase, remain the same or decrease; it depends on your new mark. Since you are being compared with a different cohort your ATAR may increase, remain the same or decrease, even if your aggregate remains the same.

What happens if I accumulate the HSC?

Students who accumulate courses towards their HSC have their scaled marks calculated the year they complete the courses.

What happens if I already have an ATAR and add a new ATAR course the following year?

Your aggregate will be re-calculated using your new course and your previous courses. Provided all your previous courses were taken within the last 5 years, your aggregate may increase or stay the same but it will not go down. However, since you are being compared with a different cohort your ATAR may increase, remain the same or decrease.

Any courses taken more than 5 years ago will be ineligible for inclusion in your new aggregate.

If I'm eligible to get bonus points, does my ATAR change?

No. Bonus points do not change your ATAR. They change your selection rank for a particular preference or course.

If bonus points don't increase my ATAR, then how do they work?

Universities allocate bonus points for different reasons. Examples include students with a strong performance in specific HSC courses, students who live in or attend school in an area defined by the university and students who have applied for consideration through Educational Access Schemes.

As the bonus points schemes for each university, and often each course at the same university, are different then your selection rank can be different for each course you list in your course preferences. For some Year 12 applicants, their selection rank for each preference is their ATAR. However, if a university allocates bonus points to you for a particular course then your selection rank for that preference is your ATAR plus bonus points.

7 APPENDIX

The following courses are not included in Tables A2 to A5 in the Appendix as they had less than 10 students in 2017:

- Arabic Beginners
- Croatian
- Dutch
- Hungarian
- Indonesian Extension
- Indonesian in Context
- Khmer
- Korean Continuers
- Malay Background Speakers
- Maltese
- Swedish
- Ukrainian.

Some other courses do not appear in all tables if they have less than the minimum number of candidates required for a particular table.

Table A1	Course enrolments *Excludes courses with less than 10 students.*
Table A2	Distributions of HSC marks by course *Excludes courses with less than 10 students.*
Table A3	Descriptive statistics and selected percentiles for HSC marks and scaled marks by course *Excludes courses with less than 10 students completing the course in the current year, or if the students completing the course in the current year are undertaking less than 25 other ATAR courses in the same year, and no percentile data are given for courses with less than 40 students.*
Table A4	Distributions of HSC marks by course, 2016–2017 *Excludes courses with less than 40 students in either year.*
Table A5	Distributions of scaled marks by course, 2016–2017 *Excludes courses with less than 40 students in either year.*
Table A6	Courses that contribute to the ATAR *Excludes courses with less than 10 students.*
Table A7	ATAR distribution
Table A8	ATAR percentiles, 2013–2017
Table A9	Relationship between the ATAR and aggregates, 2013–2017

Table A1 Course enrolments

Notes: (i) The **Number all** column includes students who have completed the course in 2017 or in a previous year (and who have done at least one ATAR course in 2017).

(ii) The **Number HSC** column shows the number of students who completed the course in 2017 or in a previous year and received an HSC award in 2017.

(iii) The **Number ATAR** column shows the number of students who completed the course in 2017 or in a previous year and who were eligible for an ATAR in 2017.

(iv) The **% Female** column shows the percentage of students in the course who were female.

(v) The **% HSC** column shows the percentage of students in the course who received an HSC award in 2017.

(vi) The **% ATAR eligible** column shows the percentage of students in the course who were eligible for an ATAR in 2017.

(vii) The **Maximum ATAR** column shows the maximum ATAR achieved by a student doing the course.

(viii) The table excludes courses with less than 10 students.

Course	Number all	Number HSC	Number ATAR	% Female	% HSC	% ATAR eligible	Maximum ATAR
Aboriginal Studies	624	529	297	75.3	84.8	47.6	99.25
Agriculture	1,506	1,413	1,087	55.2	93.8	72.2	99.95
Ancient History	8,993	8,726	8,064	56.7	97.0	89.7	99.95
Biology	18,645	18,137	17,596	62.3	97.3	94.4	99.95
Business Studies	17,895	17,329	16,215	46.9	96.8	90.6	99.95
Chemistry	11,205	10,934	10,876	45.2	97.6	97.1	99.95
Community & Family Studies	8,483	8,269	6,781	91.8	97.5	79.9	98.35
Dance	968	917	807	94.9	94.7	83.4	98.90
Design & Technology	3,284	3,170	2,777	43.9	96.5	84.6	99.55
Drama	4,788	4,581	4,125	66.3	95.7	86.2	99.90
Earth & Environmental Science	1,761	1,691	1,577	44.5	96.0	89.6	99.75
Economics	5,293	5,247	5,228	35.5	99.1	98.8	99.95
Engineering Studies	2,025	1,958	1,896	8.4	96.7	93.6	99.80
English Standard	31,495	30,540	28,271	50.0	97.0	89.8	99.40
English Advanced	26,982	26,723	26,587	58.0	99.0	98.5	99.95
English Extension 1	4,351	4,333	4,330	66.7	99.6	99.5	99.95
English Extension 2	1,677	1,671	1,667	69.2	99.6	99.4	99.95
ESL	2,383	2,325	2,203	53.8	97.6	92.4	99.95
Food Technology	3,364	3,280	2,717	79.2	97.5	80.8	99.20
Geography	4,668	4,550	4,229	47.6	97.5	90.6	99.95
Industrial Technology	5,802	5,574	3,958	14.0	96.1	68.2	98.55
Information Processes & Technology	2,923	2,666	2,436	19.4	91.2	83.3	99.95
Legal Studies	10,963	10,687	10,284	62.3	97.5	93.8	99.95
Mathematics General 2	32,191	31,237	28,450	51.3	97.0	88.4	99.90
Mathematics	17,769	16,157	16,092	46.6	90.9	90.6	99.95
Mathematics Extension 1	9,161	8,691	8,688	40.6	94.9	94.8	99.95
Mathematics Extension 2	3,289	3,216	3,215	35.9	97.8	97.8	99.95
Modern History	11,307	11,041	10,396	52.2	97.6	91.9	99.95
History Extension	2,008	2,000	1,997	63.4	99.6	99.5	99.95
Music 1	4,852	4,653	4,023	52.2	95.9	82.9	99.80
Music 2	793	742	742	52.8	93.6	93.6	99.95
Music Extension	413	409	409	50.1	99.0	99.0	99.95
PDH&PE	15,935	15,581	14,299	55.1	97.8	89.7	99.90
Physics	9,712	9,494	9,428	22.9	97.8	97.1	99.95
Senior Science	7,116	6,899	5,622	47.3	97.0	79.0	99.30

Course	Number all	Number HSC	Number ATAR	% Female	% HSC	% ATAR eligible	Maximum ATAR
Society & Culture	4,666	4,516	4,249	81.5	96.8	91.1	99.95
Software Design & Development	1,890	1,789	1,672	8.6	94.7	88.5	99.90
Studies of Religion I	9,458	9,016	8,888	53.7	95.3	94.0	99.90
Studies of Religion II	6,111	5,990	5,853	63.8	98.0	95.8	99.95
Textiles & Design	1,505	1,456	1,287	97.5	96.7	85.5	99.70
Visual Arts	9,204	8,849	7,686	71.9	96.1	83.5	99.90
Arabic Continuers	274	260	224	65.7	94.9	81.8	98.95
Arabic Extension	110	110	99	71.8	100.0	90.0	93.65
Armenian	35	15	14	54.3	42.9	40.0	98.85
Chinese Beginners	64	64	58	57.8	100.0	90.6	99.70
Chinese Continuers	128	128	126	52.3	100.0	98.4	99.95
Chinese Extension	29	29	29	48.3	100.0	100.0	99.95
Chinese & Literature	734	719	711	56.4	98.0	96.9	99.85
Chinese in Context	101	95	94	71.3	94.1	93.1	99.95
Classical Greek Continuers	27	27	27	33.3	100.0	100.0	99.95
Classical Greek Extension	19	19	19	31.6	100.0	100.0	99.95
Classical Hebrew Continuers	24	17	17	75.0	70.8	70.8	99.85
Classical Hebrew Extension	13	9	9	69.2	69.2	69.2	99.85
Filipino	17	17	17	58.8	100.0	100.0	93.80
French Beginners	543	523	488	77.0	96.3	89.9	99.75
French Continuers	747	700	696	69.7	93.7	93.2	99.95
French Extension	173	170	170	63.6	98.3	98.3	99.95
German Beginners	115	112	107	60.0	97.4	93.0	99.00
German Continuers	241	221	219	58.9	91.7	90.9	99.95
German Extension	58	55	55	51.7	94.8	94.8	99.95
Hindi	31	23	23	58.1	74.2	74.2	98.85
Indonesian Beginners	32	31	28	75.0	96.9	87.5	97.35
Indonesian Continuers	74	74	73	63.5	100.0	98.6	99.25
Indonesian & Literature	73	73	72	67.1	100.0	98.6	98.95
Italian Beginners	345	342	306	78.0	99.1	88.7	99.70
Italian Continuers	298	277	275	63.4	93.0	92.3	99.90
Italian Extension	53	52	52	56.6	98.1	98.1	99.45
Japanese Beginners	719	700	668	60.8	97.4	92.9	99.70
Japanese Continuers	699	667	661	64.7	95.4	94.6	99.95
Japanese Extension	169	159	159	62.1	94.1	94.1	99.95
Japanese & Literature	14	14	12	50.0	100.0	85.7	93.75
Japanese in Context	28	27	27	78.6	96.4	96.4	92.90
Korean Beginners	95	95	94	86.3	100.0	98.9	97.60
Korean & Literature	34	34	34	70.6	100.0	100.0	99.70
Korean in Context	64	63	58	75.0	98.4	90.6	99.50
Latin Continuers	160	159	159	43.1	99.4	99.4	99.95
Latin Extension	91	91	91	41.8	100.0	100.0	99.95
Macedonian	28	26	24	71.4	92.9	85.7	99.45
Modern Greek Beginners	84	84	78	59.5	100.0	92.9	97.40
Modern Greek Continuers	86	71	66	60.5	82.6	76.7	97.55
Modern Greek Extension	41	34	33	56.1	82.9	80.5	96.50
Modern Hebrew	49	35	35	75.5	71.4	71.4	99.40

Course	Number all	Number HSC	Number ATAR	% Female	% HSC	% ATAR eligible	Maximum ATAR
Persian	30	28	26	53.3	93.3	86.7	98.25
Polish	29	26	26	62.1	89.7	89.7	99.35
Portuguese	16	16	14	56.3	100.0	87.5	93.15
Punjabi Continuers	18	18	18	66.7	100.0	100.0	99.55
Russian	23	19	19	65.2	82.6	82.6	91.85
Serbian	22	22	21	50.0	100.0	95.5	96.60
Spanish Beginners	259	253	235	65.3	97.7	90.7	99.65
Spanish Continuers	172	165	158	72.7	95.9	91.9	99.35
Spanish Extension	53	51	51	71.7	96.2	96.2	97.85
Swedish	15	8	8	66.7	53.3	53.3	97.20
Tamil	50	25	25	70.0	50.0	50.0	99.90
Turkish	46	32	30	69.6	69.6	65.2	94.55
Vietnamese	145	137	132	55.9	94.5	91.0	99.15
Automotive Exam	323	276	170	8.4	85.4	52.6	91.35
Business Services Exam	1,156	1,082	939	77.5	93.6	81.2	99.80
Construction Exam	1,666	1,580	1,098	3.1	94.8	65.9	94.70
Electrotechnology Exam	231	220	153	2.2	95.2	66.2	92.80
Entertainment Industry Exam	949	916	825	55.4	96.5	86.9	99.20
Financial Services Exam	85	83	78	48.2	97.6	91.8	97.60
Hospitality Exam	5,350	4,981	4,449	73.3	93.1	83.2	98.70
Human Services Exam	680	665	596	92.2	97.8	87.6	98.75
Information & Digital Technology Exam	817	750	653	14.8	91.8	79.9	96.65
Metal & Engineering Exam	459	400	252	3.3	87.1	54.9	92.85
Primary Industries Exam	686	648	459	53.1	94.5	66.9	93.35
Retail Services Exam	926	801	661	69.7	86.5	71.4	96.30
Tourism Travel & Events Exam	275	269	235	89.1	97.8	85.5	94.25
Total	**72,708**	**65,875**	**57,061**	**52.3**	**90.6**	**78.5**	**99.95**

Table A2 Distributions of HSC marks by course

Notes: (i) The **Number** column shows the number of students who completed the course in 2017.

(ii) The **Median HSC mark** column shows the median HSC mark per course.

(iii) The **Median Band** column indicates the Performance Band in which the median HSC mark lies.

(iv) The **Percentage of Students in Performance Band** columns show the percentage of a course candidature in each of the Performance Bands 6 to 2. Extension courses show only Bands 4 to 2 as they have four Bands only: E1 to E4.

(v) This table excludes courses with less than 10 students.

Course	Number	Median HSC mark	Median Band	Percentage students in Performance Band				
				6	5	4	3	2
Aboriginal Studies	575	68	3	13	13	20	26	18
Agriculture	1,422	72	4	5	22	32	23	14
Ancient History	8,834	74	4	9	28	25	20	12
Biology	18,152	76	4	12	28	29	19	8
Business Studies	17,469	75	4	8	28	29	22	8
Chemistry	10,974	77	4	10	33	28	19	8
Community & Family Studies	8,362	75	4	4	26	38	20	8
Dance	925	80	5	13	41	28	15	2
Design & Technology	3,158	78	4	11	32	34	18	4
Drama	4,690	78	4	13	29	42	14	2
Earth & Environmental Science	1,725	77	4	7	30	38	17	6
Economics	5,261	79	4	15	35	25	18	5
Engineering Studies	1,972	75	4	11	25	30	23	9
English Standard	30,913	71	4	1	15	39	31	9
English Advanced	26,779	82	5	15	49	28	7	1
English Extension 1	4,333	43	E3			30	64	6
English Extension 2	1,672	39	E3			21	57	22
ESL	2,336	72	4	5	20	31	26	11
Food Technology	3,305	73	4	9	22	30	22	14
Geography	4,589	77	4	8	35	31	15	7
Industrial Technology	5,726	69	3	6	17	25	28	17
Information Processes & Technology	2,684	75	4	8	23	36	16	13
Legal Studies	10,797	78	4	13	31	31	17	5
Mathematics General 2	31,543	70	4	7	19	25	24	17
Mathematics	17,060	81	5	24	30	22	16	6
Mathematics Extension 1	8,770	42	E3			38	44	16
Mathematics Extension 2	3,223	84	E3			34	51	13
Modern History	11,139	77	4	9	30	32	15	8
History Extension	2,004	40	E3			22	58	18
Music 1	4,757	83	5	20	45	24	9	1
Music 2	748	87	5	37	52	11	<1	
Music Extension	409	46	E4			63	32	5
PDH&PE	15,679	73	4	9	22	29	22	12
Physics	9,573	75	4	11	23	34	21	7
Senior Science	7,061	72	4	6	18	36	27	8
Society & Culture	4,537	79	4	13	35	32	14	5
Software Design & Development	1,801	75	4	12	24	30	23	8

Course	Number	Median HSC mark	Median Band	Percentage students in Performance Band				
				6	5	4	3	2
Studies of Religion I	9,011	40	5	16	34	32	13	4
Studies of Religion II	5,954	79	4	7	40	31	15	5
Textiles & Design	1,471	80	5	14	37	27	16	5
Visual Arts	9,071	80	5	13	42	36	9	1
Arabic Continuers	265	82	5	10	48	33	6	2
Arabic Extension	109	39	E3			20	56	24
Armenian	25	86	5	24	48	28		
Chinese Beginners	63	81	5	38	13	17	16	14
Chinese Continuers	128	89	5	45	34	9	10	1
Chinese Extension	29	47	E4			72	28	
Chinese & Literature	721	82	5	16	52	29	4	<1
Chinese in Context	98	89	5	40	48	12		
Classical Greek Continuers	27	91	6	67	19	4	11	
Classical Greek Extension	19	47	E4			89	5	5
Classical Hebrew Continuers	23	92	6	57	17	17	9	
Classical Hebrew Extension	13	47	E4			62	31	8
Filipino	17	87	5	41	24	35		
French Beginners	538	78	4	22	22	28	14	9
French Continuers	698	83	5	26	40	24	7	2
French Extension	164	43	E3			40	53	7
German Beginners	112	89	5	43	31	14	11	1
German Continuers	226	82	5	26	33	29	10	2
German Extension	58	43	E3			41	59	
Hindi	24	87	5	21	54	25		
Indonesian Beginners	32	89	5	44	19	28	3	3
Indonesian Continuers	74	84	5	27	36	26	8	1
Indonesian & Literature	73	81	5	4	60	34	1	
Italian Beginners	339	74	4	16	19	30	20	10
Italian Continuers	282	82	5	22	34	30	9	5
Italian Extension	53	44	E3			49	49	2
Japanese Beginners	712	76	4	17	24	25	18	11
Japanese Continuers	679	83	5	28	33	21	12	4
Japanese Extension	162	43	E3			37	53	9
Japanese & Literature	14	81	5	29	29	36	7	
Japanese in Context	28	84	5	21	64	11	4	
Korean Beginners	95	85	5	29	36	23	8	3
Korean & Literature	34	84	5	24	44	24	6	3
Korean in Context	64	89	5	48	31	14	5	2
Latin Continuers	159	90	6	52	30	13	4	1
Latin Extension	90	47	E4			71	26	3
Macedonian	27	81	5	26	30	33	11	
Modern Greek Beginners	84	89	5	48	30	12	6	5
Modern Greek Continuers	78	86	5	37	36	14	8	4
Modern Greek Extension	36	46	E4			64	36	
Modern Hebrew	43	92	6	65	35			

Course	Number	Median HSC mark	Median Band	Percentage students in Performance Band				
				6	5	4	3	2
Persian	29	87	5	38	41	17	3	
Polish	27	88	5	33	59	4	4	
Portuguese	15	90	6	53	27	20		
Punjabi Continuers	18	82	5	17	44	39		
Russian	21	90	6	62	33	5		
Serbian	22	88	5	27	68	5		
Spanish Beginners	255	79	4	13	35	32	11	8
Spanish Continuers	171	79	4	6	38	36	16	4
Spanish Extension	53	40	E3			19	58	21
Tamil	25	90	6	52	44	4		
Turkish	32	88	5	34	44	13	9	
Vietnamese	145	83	5	12	54	28	5	1
Automotive Exam	287	70	4	5	8	41	31	13
Business Services Exam	1,102	77	4	7	32	37	14	8
Construction Exam	1,616	72	4	2	17	44	28	8
Electrotechnology Exam	223	70	4	1	13	37	42	6
Entertainment Industry Exam	941	77	4	10	29	37	16	7
Financial Services Exam	81	72	4	5	27	26	28	12
Hospitality Exam	5,084	74	4	4	27	38	20	10
Human Services Exam	674	73	4	2	19	47	26	6
Information & Digital Technology Exam	716	75	4	3	21	47	22	6
Metal & Engineering Exam	413	66	3	<1	8	29	37	18
Primary Industries Exam	662	75	4	4	26	40	22	7
Retail Services Exam	860	71	4	<1	9	48	30	11
Tourism Travel & Events Exam	274	76	4	<1	22	58	15	4

Table A3 Descriptive statistics and selected percentiles for HSC marks and scaled marks by course

Notes: (i) The **Number** column shows the number of students who completed the course in 2017.
(ii) The **P_{99}, P_{90}, P_{75}, P_{50}, P_{25} columns** refer to the 99th, 90th, 75th, 50th and 25th percentiles respectively.
(iii) The table excludes courses with less than 10 students completing the course in the current year, or if the students completing the course in the current year are undertaking less than 25 other ATAR courses in the same year, and no percentile data are given for courses with less than 40 students.
(iv) This table should not be used as a simple HSC to scaled mark conversion table. For each HSC mark, there can be a range of raw marks and therefore a range of scaled marks.

Course	Number	Type of mark	Mean	SD	Max. mark	P99	P90	P75	P50	P25
Aboriginal Studies	575	HSC	34.4	8.1	49.5	49.0	46.0	40.5	34.0	29.0
		scaled	12.8	12.4	43.0	42.2	35.1	20.0	8.0	2.7
Agriculture	1,422	HSC	35.5	6.3	49.0	47.0	43.5	40.0	36.0	31.5
		scaled	18.9	11.1	45.5	42.2	35.2	27.8	17.7	9.5
Ancient History	8,834	HSC	36.1	7.4	49.0	47.5	44.5	41.5	37.0	31.5
		scaled	23.8	11.0	49.7	45.3	38.4	32.3	24.1	15.2
Biology	18,152	HSC	37.4	6.5	49.5	47.5	45.0	42.5	38.0	33.5
		scaled	26.2	10.3	50.0	45.7	40.0	34.4	26.6	18.3
Business Studies	17,469	HSC	36.8	6.5	49.0	47.0	44.5	41.5	37.5	33.0
		scaled	24.1	10.8	49.6	44.9	38.5	32.7	24.4	15.6
Chemistry	10,974	HSC	37.8	5.7	49.0	47.0	44.5	42.5	38.5	34.0
		scaled	31.4	9.6	50.0	46.8	42.8	39.0	32.9	24.9
Community & Family Studies	8,362	HSC	36.6	5.7	49.0	46.5	43.0	40.5	37.5	33.5
		scaled	18.7	10.4	44.0	40.2	33.5	26.7	17.9	10.0
Dance	925	HSC	39.5	5.2	50.0	49.0	45.0	43.5	40.0	36.0
		scaled	23.3	11.3	47.7	45.4	38.7	32.7	22.6	13.9
Design & Technology	3,158	HSC	38.6	5.2	49.5	48.0	45.0	42.5	39.0	35.0
		scaled	22.0	10.6	47.8	45.1	36.6	30.1	21.7	13.2
Drama	4,690	HSC	39.1	4.5	49.5	48.0	45.5	42.5	39.0	36.0
		scaled	23.5	10.9	49.7	47.0	39.1	31.5	22.9	15.3
Earth & Environmental Science	1,725	HSC	37.5	5.7	49.0	47.5	44.0	41.5	38.5	34.5
		scaled	23.4	10.6	48.5	45.1	37.5	31.6	23.8	15.3
Economics	5,261	HSC	38.5	6.3	49.5	47.5	45.5	43.5	39.5	34.5
		scaled	32.1	9.6	50.0	46.8	42.8	39.3	34.1	26.2
Engineering Studies	1,972	HSC	37.3	5.8	49.0	47.5	45.0	42.0	37.5	33.0
		scaled	26.0	10.1	50.0	45.9	39.2	33.8	26.4	18.3
English Standard	30,913	HSC	34.8	5.4	48.0	44.5	41.0	38.5	35.5	32.0
		scaled	20.1	8.7	47.7	40.1	31.9	26.2	19.8	13.6
English Advanced	26,779	HSC	40.7	4.2	49.5	47.5	45.5	43.5	41.0	38.5
		scaled	31.5	8.5	50.0	46.5	41.9	38.0	32.4	26.0
English Extension 1	4,333	HSC	41.7	4.6	50.0	48.0	47.0	45.0	43.0	39.0
		scaled	35.9	6.5	50.0	46.7	43.4	40.6	37.0	32.2
English Extension 2	1,672	HSC	39.2	5.6	50.0	50.0	47.0	44.0	39.0	35.0
		scaled	35.5	7.1	50.0	49.0	45.0	41.0	35.8	30.4
ESL	2,336	HSC	35.1	7.0	49.0	47.0	43.0	40.0	36.0	31.5
		scaled	22.2	11.5	49.7	46.1	37.9	30.9	22.1	13.4
Food Technology	3,305	HSC	36.0	6.5	49.5	47.5	44.5	41.0	36.5	31.5
		scaled	20.2	11.2	47.1	42.4	36.0	29.2	19.3	10.6

Course	Number	Type of mark	Mean	SD	Max. mark	P99	P90	P75	P50	P25
Geography	4,589	HSC	37.6	6.1	48.5	47.0	44.5	42.0	38.5	34.5
		scaled	25.4	11.0	50.0	45.8	39.5	34.2	25.9	17.0
Industrial Technology	5,726	HSC	34.1	7.2	49.5	47.5	43.0	39.0	34.5	29.5
		scaled	16.9	9.8	40.9	38.5	31.2	24.4	15.6	8.5
Information Processes & Technology	2,684	HSC	36.1	6.7	49.0	47.5	44.0	40.5	37.5	32.0
		scaled	21.5	11.0	47.9	44.2	36.2	29.8	21.7	12.9
Legal Studies	10,797	HSC	38.2	6.2	49.0	47.5	45.5	43.0	39.0	35.0
		scaled	25.7	10.9	50.0	45.7	39.9	34.3	26.3	17.5
Mathematics General 2	31,543	HSC	34.5	7.4	50.0	47.5	44.0	40.0	35.0	29.5
		scaled	21.7	10.5	46.3	42.5	36.3	30.1	21.3	13.3
Mathematics	17,060	HSC	39.2	7.1	50.0	49.5	47.0	44.5	40.5	35.0
		scaled	31.2	10.2	50.0	48.3	43.4	38.9	32.4	24.8
Mathematics Extension 1	8,770	HSC	40.9	7.2	50.0	50.0	48.5	47.0	42.0	37.0
		scaled	39.3	6.7	50.0	49.5	47.3	44.6	40.3	35.3
Mathematics Extension 2	3,223	HSC	40.8	6.8	50.0	49.5	48.0	46.0	42.0	37.5
		scaled	43.2	4.7	50.0	49.5	47.9	46.4	44.2	41.3
Modern History	11,139	HSC	37.1	6.9	49.0	47.0	44.5	42.0	38.5	34.0
		scaled	25.9	11.1	50.0	45.9	40.0	34.8	26.9	17.8
History Extension	2,004	HSC	39.2	6.1	50.0	49.0	46.0	44.0	40.0	35.0
		scaled	33.7	6.8	49.6	46.5	42.0	38.6	34.2	29.5
Music 1	4,757	HSC	41.0	4.5	50.0	48.5	46.0	44.0	41.5	38.5
		scaled	21.5	10.6	47.2	43.5	36.2	29.6	21.1	13.1
Music 2	748	HSC	43.5	2.9	49.5	49.0	47.5	45.5	43.5	41.5
		scaled	34.2	8.3	50.0	48.6	44.9	40.6	34.8	28.9
Music Extension	409	HSC	44.6	5.2	50.0	50.0	50.0	49.0	46.0	42.0
		scaled	35.5	9.6	50.0	50.0	48.3	43.7	36.1	28.5
PDH&PE	15,679	HSC	35.7	7.0	49.0	47.0	44.5	41.0	36.5	31.5
		scaled	22.7	10.6	48.2	43.2	37.3	31.3	22.6	14.2
Physics	9,573	HSC	36.9	6.4	49.0	47.5	45.0	41.5	37.5	33.5
		scaled	30.5	9.9	50.0	46.5	42.4	38.5	31.8	23.4
Senior Science	7,061	HSC	35.7	6.3	48.5	46.5	43.5	39.5	36.0	32.5
		scaled	18.5	10.1	43.2	39.8	32.9	26.1	17.8	10.2
Society & Culture	4,537	HSC	38.8	5.7	49.5	48.0	45.5	43.0	39.5	35.5
		scaled	23.5	10.6	48.6	45.1	37.9	31.6	23.1	15.4
Software Design & Development	1,801	HSC	37.0	6.4	49.5	48.0	45.0	42.0	37.5	33.0
		scaled	24.1	10.7	48.8	44.7	38.3	32.6	24.1	15.8
Studies of Religion I	9,011	HSC	39.2	5.1	50.0	48.0	45.0	43.0	40.0	36.0
		scaled	27.9	8.8	48.1	44.2	39.0	34.7	28.5	22.0
Studies of Religion II	5,954	HSC	38.3	5.3	49.0	47.0	44.5	42.5	39.5	35.5
		scaled	27.3	9.9	50.0	45.2	39.5	34.9	28.5	20.7
Textiles & Design	1,471	HSC	38.9	5.8	50.0	48.5	45.5	43.0	40.0	35.5
		scaled	22.6	11.4	49.0	45.9	38.3	31.1	22.5	13.4
Visual Arts	9,071	HSC	40.1	4.1	50.0	48.0	45.0	43.0	40.0	37.5
		scaled	21.9	11.2	49.1	45.1	37.4	30.5	21.3	12.8

Course	Number	Type of mark	Mean	SD	Max. mark	P99	P90	P75	P50	P25
Arabic Continuers	265	HSC	40.0	4.2	47.5	46.5	44.5	43.0	41.0	37.5
		scaled	16.8	11.5	44.1	42.4	34.4	24.7	15.3	6.4
Arabic Extension	109	HSC	38.9	5.2	47.0	47.0	46.0	43.0	39.0	35.0
		scaled	23.4	7.3	39.6	38.2	32.7	29.1	22.6	18.5
Chinese Beginners	63	HSC	39.1	8.3	49.5	49.5	48.5	47.5	40.5	30.5
		scaled	22.8	13.5	48.1	48.1	40.9	35.7	22.5	8.5
Chinese Continuers	128	HSC	42.9	4.9	49.5	49.0	48.0	46.5	44.0	40.5
		scaled	32.5	9.3	50.0	45.9	44.2	39.8	33.7	27.1
Chinese Extension	29	HSC	46.0	2.0	50.0					
		scaled	37.3	5.6	50.0					
Chinese & Literature	721	HSC	41.1	3.4	47.5	47.0	45.5	43.5	41.0	39.0
		scaled	22.8	10.8	48.9	46.6	38.2	30.7	21.3	14.3
Chinese in Context	98	HSC	43.9	3.0	49.0	49.0	47.5	46.0	44.5	41.5
		scaled	32.0	9.3	50.0	50.0	44.6	39.5	32.6	24.5
Classical Greek Continuers	27	HSC	43.7	4.9	49.5					
		scaled	39.0	7.5	50.0					
Classical Greek Extension	19	HSC	45.7	4.9	50.0					
		scaled	41.4	7.0	50.0					
Classical Hebrew Continuers	23	HSC	43.8	5.0	49.0					
		scaled	36.7	10.1	50.0					
Classical Hebrew Extension	13	HSC	45.2	4.8	50.0					
		scaled	37.8	8.7	50.0					
Filipino	17	HSC	42.7	4.1	49.0					
		scaled	21.7	10.0	42.8					
French Beginners	538	HSC	38.2	7.3	49.5	49.0	47.0	44.0	39.0	34.0
		scaled	24.6	11.1	49.6	47.5	39.5	32.9	25.0	16.2
French Continuers	698	HSC	41.0	5.1	49.0	48.5	46.5	45.0	41.5	38.5
		scaled	34.6	8.4	50.0	49.2	44.5	40.5	35.4	29.9
French Extension	164	HSC	42.1	4.8	50.0	49.0	48.0	46.0	43.0	38.0
		scaled	39.7	5.1	50.0	48.6	46.6	44.0	39.8	36.0
German Beginners	112	HSC	42.3	4.9	49.0	49.0	47.0	45.5	44.0	39.5
		scaled	27.5	10.3	48.8	48.8	39.2	34.2	29.8	19.8
German Continuers	226	HSC	40.8	4.8	49.0	48.5	47.0	45.0	41.0	37.0
		scaled	34.0	8.5	50.0	49.1	45.0	40.5	35.0	27.6
German Extension	58	HSC	43.1	3.2	49.0	49.0	46.0	46.0	43.0	41.0
		scaled	39.2	5.5	50.0	50.0	45.5	43.7	38.9	36.2
Hindi	24	HSC	42.5	3.0	48.0					
		scaled	32.0	11.4	50.0					
Indonesian Beginners	32	HSC	41.8	5.9	48.5					
		scaled	25.7	13.2	50.0					
Indonesian Continuers	74	HSC	40.6	5.5	48.0	48.0	46.5	45.0	42.0	37.0
		scaled	30.4	9.6	48.7	48.7	42.8	37.8	31.2	23.4
Indonesian & Literature	73	HSC	40.4	2.1	46.5	46.5	43.0	41.5	40.5	39.0
		scaled	31.7	5.6	45.3	45.3	38.9	34.8	31.7	28.4

Course	Number	Type of mark	Mean	SD	Max. mark	P99	P90	P75	P50	P25
Italian Beginners	339	HSC	36.7	7.9	49.5	49.0	46.5	42.0	37.0	32.5
		scaled	24.5	11.4	49.9	47.4	41.1	32.6	23.7	16.0
Italian Continuers	282	HSC	40.2	5.3	49.5	49.0	46.5	44.5	41.0	37.0
		scaled	31.7	8.2	49.5	46.6	41.6	38.0	32.0	26.7
Italian Extension	53	HSC	43.5	3.2	48.0	48.0	47.0	45.0	44.0	41.0
		scaled	37.6	5.1	50.0	50.0	42.7	40.5	38.2	34.3
Japanese Beginners	712	HSC	37.0	7.9	50.0	49.5	46.0	43.0	38.0	32.0
		scaled	23.4	11.3	48.3	46.1	38.0	32.6	23.2	14.1
Japanese Continuers	679	HSC	40.5	6.1	49.5	49.0	47.5	45.0	41.5	37.0
		scaled	31.3	9.5	50.0	47.9	43.0	38.6	32.3	25.3
Japanese Extension	162	HSC	41.7	5.1	49.0	49.0	47.0	46.0	43.0	38.0
		scaled	37.7	5.1	50.0	48.1	44.8	41.0	37.9	34.2
Japanese & Literature	14	HSC	40.9	4.3	49.0					
		scaled	18.6	11.4	44.9					
Japanese in Context	28	HSC	42.3	2.7	47.0					
		scaled	29.5	6.8	44.6					
Korean Beginners	95	HSC	41.3	5.0	50.0	50.0	46.5	45.0	42.5	38.0
		scaled	26.7	9.6	47.5	47.5	37.6	33.8	28.3	20.1
Korean & Literature	34	HSC	41.3	4.9	49.0					
		scaled	26.6	10.7	50.0					
Korean in Context	64	HSC	43.0	4.6	48.5	48.5	47.5	46.0	44.5	41.0
		scaled	26.5	11.7	50.0	50.0	43.5	34.7	26.8	17.5
Latin Continuers	159	HSC	43.6	4.4	49.5	49.0	48.0	47.0	45.0	41.5
		scaled	40.3	6.9	50.0	49.5	47.6	45.2	41.5	37.5
Latin Extension	90	HSC	45.4	4.3	50.0	50.0	49.0	48.0	47.0	44.0
		scaled	42.2	6.0	50.0	50.0	48.2	46.8	43.7	38.9
Macedonian	27	HSC	40.8	4.3	47.5					
		scaled	26.2	12.3	50.0					
Modern Greek Beginners	84	HSC	42.6	5.7	49.5	49.5	48.5	47.0	44.5	40.0
		scaled	26.0	11.3	48.8	48.8	40.8	34.4	27.2	17.9
Modern Greek Continuers	78	HSC	42.0	5.9	50.0	50.0	48.0	46.5	43.0	39.5
		scaled	24.8	12.2	50.0	50.0	40.2	34.4	24.1	16.2
Modern Greek Extension	36	HSC	45.1	3.2	49.0					
		scaled	31.1	9.8	48.5					
Modern Hebrew	43	HSC	45.7	2.0	49.0	49.0	48.0	47.5	46.0	44.5
		scaled	37.2	6.8	50.0	50.0	46.7	42.9	37.9	32.3
Persian	29	HSC	43.1	3.8	48.0					
		scaled	21.8	13.2	47.5					
Polish	27	HSC	43.6	3.5	49.0					
		scaled	29.7	9.0	49.7					
Portuguese	15	HSC	43.2	3.1	46.5					
		scaled	31.4	12.7	49.1					
Punjabi Continuers	18	HSC	41.4	2.6	46.0					
		scaled	29.4	9.2	47.8					

Course	Number	Type of mark	Mean	SD	Max. mark	P99	P90	P75	P50	P25
Russian	21	HSC	45.4	2.8	49.0					
		scaled	29.8	8.9	46.8					
Serbian	22	HSC	43.3	2.6	46.5					
		scaled	24.5	13.1	48.9					
Spanish Beginners	255	HSC	38.8	5.7	49.5	49.0	45.0	43.0	39.5	35.5
		scaled	25.7	11.3	50.0	49.0	40.4	34.2	25.7	16.9
Spanish Continuers	171	HSC	38.5	4.3	46.5	46.0	44.5	42.0	39.5	35.5
		scaled	25.6	11.2	50.0	49.4	41.6	33.4	26.1	17.6
Spanish Extension	53	HSC	39.0	5.2	47.0	47.0	45.0	44.0	40.0	36.0
		scaled	32.2	8.0	49.4	49.4	42.2	38.3	33.0	27.4
Turkish	32	HSC	42.7	4.3	47.0					
		scaled	25.8	12.9	46.6					
Vietnamese	145	HSC	40.8	3.6	48.0	47.0	45.0	43.0	41.5	39.0
		scaled	22.4	10.7	48.1	46.0	37.6	29.6	21.7	14.6
Automotive Exam	287	HSC	35.1	5.0	47.5	47.0	41.5	38.0	35.0	31.5
		scaled	13.9	9.0	36.1	35.6	27.8	20.6	12.2	6.3
Business Services Exam	1,102	HSC	37.7	5.8	49.5	48.0	44.0	41.5	38.5	35.0
		scaled	18.6	10.2	42.9	40.9	32.4	26.1	17.8	10.5
Construction Exam	1,616	HSC	36.0	4.5	48.0	45.5	41.5	39.0	36.0	33.0
		scaled	15.7	9.5	39.1	36.8	29.7	23.5	13.8	7.8
Electrotechnology Exam	223	HSC	35.1	4.3	45.5	44.5	40.5	38.0	35.0	33.0
		scaled	17.1	8.9	38.8	37.1	29.7	23.7	15.8	10.7
Entertainment Industry Exam	941	HSC	37.8	5.5	50.0	47.0	44.5	41.5	38.5	35.0
		scaled	21.1	9.2	43.7	39.9	33.4	28.3	21.2	13.8
Financial Services Exam	81	HSC	36.5	5.2	47.5	47.5	43.0	41.0	36.0	33.0
		scaled	25.5	9.8	48.0	48.0	37.5	32.1	25.0	19.4
Hospitality Exam	5,084	HSC	36.5	5.5	48.5	46.0	43.0	40.5	37.0	33.5
		scaled	19.1	10.0	43.7	41.0	33.9	26.8	18.7	11.7
Human Services Exam	674	HSC	36.4	4.2	49.5	46.0	41.5	39.0	36.5	33.5
		scaled	18.7	9.4	41.9	40.0	32.8	25.5	18.1	11.1
Information & Digital Technology Exam	716	HSC	36.7	4.8	47.5	45.5	42.5	39.5	37.0	33.5
		scaled	18.0	9.4	40.9	38.4	31.6	24.5	16.9	10.0
Metal & Engineering Exam	413	HSC	32.6	5.8	45.5	43.5	39.0	36.5	33.0	29.5
		scaled	14.7	9.6	38.2	36.2	28.4	21.4	13.3	6.4
Primary Industries Exam	662	HSC	37.1	4.9	48.5	47.0	42.5	40.5	37.5	34.5
		scaled	15.8	9.6	39.3	37.4	28.8	23.1	14.8	8.1
Retail Services Exam	860	HSC	34.8	4.6	45.0	43.5	39.5	38.0	35.5	32.0
		scaled	16.7	10.2	41.7	40.3	31.2	24.9	15.6	8.0
Tourism Travel & Events Exam	274	HSC	37.4	3.5	45.0	44.0	41.5	39.5	38.0	35.5
		scaled	21.7	9.4	44.5	41.9	34.5	28.0	21.9	14.6

Table A4 Distributions of HSC marks by course, 2016–2017

Notes: (i) The **Number** column shows the number of students who completed the course in the given year.

(ii) Columns **45, 40, 35, 30** and **25** show the percentage of the course candidature with an HSC mark less than the specified mark.

(iii) The table excludes courses with less than 40 students in either year.

Course	Year	Number	Percentage of students with HSC mark less than:				
			45	40	35	30	25
Aboriginal Studies	2017	575	86.8	73.4	53.6	27.7	9.6
	2016	496	90.9	75.8	54.8	25.8	8.5
Agriculture	2017	1,422	95.0	73.2	41.7	18.4	4.1
	2016	1,395	92.7	68.7	40.4	16.8	4.2
Ancient History	2017	8,834	91.1	63.5	38.1	18.4	6.7
	2016	9,909	91.7	69.0	41.4	17.4	5.0
Biology	2017	18,152	88.0	60.4	31.3	11.9	3.6
	2016	17,735	91.2	64.7	35.0	9.7	2.2
Business Studies	2017	17,469	91.7	63.3	34.4	12.7	4.5
	2016	17,130	91.1	65.2	35.8	12.9	2.6
Chemistry	2017	10,974	90.5	57.1	28.6	9.2	1.3
	2016	10,554	90.3	58.9	26.4	5.7	2.0
Community & Family Studies	2017	8,362	95.7	69.8	32.0	11.5	3.5
	2016	7,944	94.8	69.0	34.6	14.2	4.2
Dance	2017	925	87.2	46.3	18.3	3.0	1.4
	2016	878	90.5	51.8	22.2	4.3	1.6
Design & Technology	2017	3,158	88.7	56.6	22.6	5.1	0.8
	2016	3,200	87.5	59.0	23.2	4.5	0.6
Drama	2017	4,690	87.1	57.8	16.0	2.1	0.2
	2016	4,723	85.6	57.3	16.7	1.9	0.1
Earth & Environmental Science	2017	1,725	93.4	63.8	25.7	8.3	2.6
	2016	1,592	93.5	65.3	31.0	10.8	3.8
Economics	2017	5,261	85.5	50.8	25.9	7.6	2.9
	2016	5,196	86.1	54.6	25.8	5.6	1.8
Engineering Studies	2017	1,972	89.1	63.7	33.6	10.5	1.4
	2016	2,006	89.1	61.7	28.2	5.2	1.3
English Standard	2017	30,913	99.1	84.0	44.9	13.7	4.2
	2016	31,290	99.1	86.5	50.5	12.7	2.8
English Advanced	2017	26,779	84.8	36.3	8.2	1.4	0.4
	2016	26,080	84.6	38.0	9.5	1.1	0.2
English Extension 1	2017	4,333	70.0	26.3	6.5	1.6	0.7
	2016	4,354	64.6	21.7	4.8	1.0	0.2
English Extension 2	2017	1,672	79.4	51.9	22.4	3.9	0.4
	2016	1,619	81.8	51.4	20.4	5.1	0.6
ESL	2017	2,336	94.7	74.5	44.0	17.5	6.9
	2016	2,327	95.3	72.7	40.7	15.7	6.2
Food Technology	2017	3,305	91.5	69.7	40.1	18.2	3.8
	2016	3,535	93.1	70.1	40.5	17.7	2.7

Course	Year	Number	Percentage of students with HSC mark less than:				
			45	40	35	30	25
Geography	2017	4,589	92.3	57.7	26.3	10.8	3.4
	2016	4,283	91.6	58.7	29.1	10.0	2.4
Industrial Technology	2017	5,726	94.3	77.5	52.6	25.1	8.2
	2016	5,575	92.7	74.0	46.5	22.1	7.6
Information Processes & Technology	2017	2,684	92.5	69.7	34.2	18.3	5.4
	2016	2,778	93.0	71.8	36.2	17.3	5.6
Legal Studies	2017	10,797	86.9	55.8	24.9	8.3	3.3
	2016	10,293	87.8	57.2	28.6	11.0	3.8
Mathematics General 2	2017	31,543	93.1	74.2	49.3	25.4	8.4
	2016	31,758	94.6	74.1	47.9	24.3	8.3
Mathematics	2017	17,060	76.4	46.3	24.8	9.1	2.9
	2016	16,139	76.8	47.3	23.4	7.8	3.5
Mathematics Extension 1	2017	8,770	61.8	36.3	18.1	8.2	2.6
	2016	8,671	66.9	40.7	20.4	8.3	2.8
Mathematics Extension 2	2017	3,223	66.4	36.1	15.9	6.2	2.4
	2016	3,251	67.9	35.9	14.5	5.7	2.0
Modern History	2017	11,139	90.7	60.8	28.7	13.5	5.7
	2016	10,785	90.6	58.9	26.8	13.0	4.2
History Extension	2017	2,004	78.3	48.0	20.2	6.0	2.0
	2016	1,862	78.4	46.9	19.2	5.9	1.4
Music 1	2017	4,757	79.5	34.3	10.3	1.3	0.4
	2016	4,677	81.5	37.0	10.8	1.7	0.4
Music 2	2017	748	63.1	10.8	0.1	0.0	0.0
	2016	717	65.6	10.5	0.1	0.0	0.0
Music Extension	2017	409	36.7	18.8	5.1	1.5	0.0
	2016	453	48.1	21.0	6.4	1.3	0.4
PDH&PE	2017	15,679	91.1	69.1	40.2	18.7	6.5
	2016	15,498	88.8	65.2	37.2	16.5	6.3
Physics	2017	9,573	89.3	66.0	32.5	11.5	4.1
	2016	9,156	91.6	69.9	34.0	11.6	3.9
Senior Science	2017	7,061	93.8	75.4	39.8	13.1	5.5
	2016	6,656	93.6	71.0	31.3	8.5	2.4
Society & Culture	2017	4,537	87.1	52.4	20.5	6.6	1.8
	2016	4,630	86.2	51.7	20.8	5.4	1.2
Software Design & Development	2017	1,801	88.0	64.1	34.2	11.3	3.3
	2016	1,842	89.1	66.3	31.7	7.2	0.8
Studies of Religion I	2017	9,011	84.5	50.0	17.8	4.3	0.5
	2016	8,926	86.5	49.9	23.9	5.1	0.8
Studies of Religion II	2017	5,954	93.0	53.3	22.3	7.2	1.7
	2016	6,280	90.7	51.8	28.8	9.4	2.5
Textiles & Design	2017	1,471	86.2	49.4	22.6	6.7	1.6
	2016	1,515	84.6	53.2	22.2	6.1	1.1
Visual Arts	2017	9,071	87.3	45.3	9.7	1.1	0.1
	2016	8,913	85.9	45.4	12.3	1.9	0.2

Course	Year	Number	Percentage of students with HSC mark less than:				
			45	40	35	30	25
Arabic Continuers	2017	265	90.2	41.9	9.1	2.6	0.4
	2016	213	88.7	46.9	15.5	3.8	1.4
Arabic Extension	2017	109	79.8	54.1	23.9	2.8	0.0
	2016	66	80.3	45.5	22.7	1.5	0.0
Chinese Continuers	2017	128	54.7	20.3	10.9	0.8	0.0
	2016	98	55.1	17.3	5.1	3.1	2.0
Chinese & Literature	2017	721	84.5	32.9	4.2	0.6	0.1
	2016	672	85.7	33.5	3.4	0.7	0.6
Chinese in Context	2017	98	60.2	12.2	0.0	0.0	0.0
	2016	84	57.1	13.1	2.4	0.0	0.0
French Beginners	2017	538	77.7	55.6	27.5	13.6	4.3
	2016	616	78.2	53.4	28.1	14.4	4.7
French Continuers	2017	698	74.5	34.2	9.9	2.9	0.7
	2016	779	70.2	34.7	10.8	3.2	0.4
French Extension	2017	164	59.8	30.5	6.7	1.2	0.0
	2016	187	61.0	28.9	11.2	3.7	0.0
German Beginners	2017	112	57.1	25.9	11.6	0.9	0.0
	2016	113	66.4	38.9	21.2	4.4	2.7
German Continuers	2017	226	74.3	41.2	12.4	2.2	0.0
	2016	249	77.1	45.8	21.7	4.8	0.4
German Extension	2017	58	58.6	17.2	0.0	0.0	0.0
	2016	49	61.2	20.4	4.1	0.0	0.0
Indonesian Continuers	2017	74	73.0	36.5	10.8	2.7	1.4
	2016	80	80.0	52.5	15.0	2.5	0.0
Indonesian & Literature	2017	73	95.9	35.6	1.4	0.0	0.0
	2016	62	96.8	90.3	6.5	0.0	0.0
Italian Beginners	2017	339	83.8	64.6	34.8	15.0	5.3
	2016	445	85.4	64.7	42.7	21.3	8.3
Italian Continuers	2017	282	77.7	43.3	13.5	5.0	0.0
	2016	273	78.8	41.8	16.9	5.5	2.2
Italian Extension	2017	53	50.9	15.1	1.9	0.0	0.0
	2016	57	59.6	17.5	1.8	0.0	0.0
Japanese Beginners	2017	712	83.4	59.6	34.3	16.4	5.5
	2016	665	82.4	56.5	35.0	19.4	5.1
Japanese Continuers	2017	679	71.9	38.9	17.8	5.7	1.5
	2016	640	76.7	43.4	20.0	5.9	1.3
Japanese Extension	2017	162	63.0	30.2	9.9	1.2	0.6
	2016	179	64.2	31.3	10.1	3.9	1.7
Korean in Context	2017	64	51.6	20.3	6.3	1.6	0.0
	2016	54	35.2	3.7	0.0	0.0	0.0
Latin Continuers	2017	159	47.8	18.2	5.0	1.3	0.6
	2016	164	51.2	19.5	4.9	1.2	0.0
Latin Extension	2017	90	28.9	13.3	3.3	0.0	0.0
	2016	114	29.8	7.9	1.8	1.8	0.0

Course	Year	Number	Percentage of students with HSC mark less than:				
			45	40	35	30	25
Modern Greek Beginners	2017	84	52.4	22.6	10.7	4.8	0.0
	2016	69	53.6	34.8	20.3	10.1	1.4
Modern Greek Continuers	2017	78	62.8	26.9	12.8	5.1	1.3
	2016	97	70.1	32.0	2.1	0.0	0.0
Modern Hebrew	2017	43	34.9	0.0	0.0	0.0	0.0
	2016	46	34.8	2.2	0.0	0.0	0.0
Spanish Beginners	2017	255	86.7	52.2	20.4	9.0	0.8
	2016	147	88.4	56.5	23.8	5.4	0.7
Spanish Continuers	2017	171	94.2	56.1	19.9	3.5	0.0
	2016	147	93.2	51.7	21.1	4.8	0.7
Spanish Extension	2017	53	81.1	47.2	22.6	3.8	1.9
	2016	42	88.1	42.9	11.9	2.4	2.4
Vietnamese	2017	145	88.3	33.8	6.2	1.4	0.0
	2016	125	96.8	47.2	13.6	3.2	0.8
Automotive Exam	2017	287	95.5	87.1	46.0	14.6	1.4
	2016	333	97.0	84.7	43.5	11.4	0.9
Business Services Exam	2017	1,102	93.5	61.3	23.9	9.9	2.2
	2016	1,021	96.0	69.6	40.0	11.4	2.3
Construction Exam	2017	1,616	97.8	81.3	36.9	9.0	0.5
	2016	1,491	98.7	80.9	31.7	5.0	0.3
Electrotechnology Exam	2017	223	99.1	86.5	49.3	7.6	1.3
	2016	264	98.9	88.6	41.3	8.7	0.0
Entertainment Industry Exam	2017	941	90.2	61.1	24.3	8.3	1.3
	2016	846	93.5	61.5	19.9	9.5	0.2
Financial Services Exam	2017	81	95.1	67.9	42.0	13.6	1.2
	2016	111	95.5	71.2	32.4	9.0	0.9
Hospitality Exam	2017	5,084	96.4	69.9	32.4	12.0	1.7
	2016	4,916	96.3	68.4	35.5	11.3	4.0
Human Services Exam	2017	674	97.9	79.2	32.3	6.1	0.1
	2016	654	98.6	80.4	39.8	7.8	0.3
Information & Digital Technology Exam	2017	716	97.5	76.1	29.5	7.7	1.3
	2016	806	98.6	81.0	28.8	6.1	0.9
Metal & Engineering Exam	2017	413	99.8	91.8	62.7	25.9	8.0
	2016	492	100.0	87.2	51.4	14.8	3.3
Primary Industries Exam	2017	662	95.6	69.5	29.5	7.7	0.8
	2016	556	96.8	74.5	30.2	3.6	0.2
Retail Services Exam	2017	860	99.8	90.6	42.7	12.6	1.7
	2016	899	99.6	78.1	31.5	6.5	1.2
Tourism Travel & Events Exam	2017	274	99.6	77.4	19.0	4.0	0.0
	2016	355	99.2	85.6	45.1	14.9	2.8

Table A5 Distributions of scaled marks by course, 2016–2017

Notes: (i) The **Number** column shows the number of students who completed the course in the given year.

(ii) Columns **45, 40, 35, 30, 25, 20** and **15** show the percentage of the course candidature with a scaled mark less than the specified mark.

(iii) The table excludes courses with less than 40 students in either year.

Course	Year	Number	Percentage of students with scaled mark less than:						
			45	40	35	30	25	20	15
Aboriginal Studies	2017	575	100	96.3	89.9	85.0	81.4	75.1	65.4
	2016	496	100	95.4	89.9	85.3	79.0	74.0	64.7
Agriculture	2017	1,422	99.9	96.9	89.4	80.7	68.9	57.2	41.8
	2016	1,395	99.9	95.7	87.0	77.1	66.0	55.4	40.7
Ancient History	2017	8,834	98.7	93.0	82.2	68.2	52.8	37.7	24.4
	2016	9,909	98.7	92.4	82.1	68.4	52.7	37.1	23.1
Biology	2017	18,152	98.3	90.0	76.9	61.2	45.0	29.6	16.5
	2016	17,735	99.0	91.8	77.8	60.7	43.6	27.3	14.8
Business Studies	2017	17,469	99.2	92.9	81.6	66.9	51.9	37.3	23.5
	2016	17,130	99.1	93.1	81.4	67.5	52.5	37.3	23.5
Chemistry	2017	10,974	96.1	79.4	58.0	39.3	25.2	14.7	6.6
	2016	10,554	95.9	78.0	57.3	39.2	25.0	14.3	6.6
Community & Family Studies	2017	8,362	100.0	98.9	92.7	82.8	70.5	56.3	40.8
	2016	7,944	100.0	98.2	91.5	81.8	70.0	57.2	40.9
Dance	2017	925	98.6	93.0	80.3	68.1	56.5	41.1	27.7
	2016	878	98.6	92.5	82.2	70.5	57.1	44.0	29.0
Design & Technology	2017	3,158	99.0	94.6	87.3	74.9	60.6	44.2	30.6
	2016	3,200	99.5	95.3	87.4	76.2	60.7	44.7	28.8
Drama	2017	4,690	97.9	91.7	82.7	71.8	56.8	40.3	24.1
	2016	4,723	98.4	92.0	82.5	70.6	56.5	41.7	25.3
Earth & Environmental Science	2017	1,725	99.0	95.0	83.7	70.4	54.6	38.6	24.1
	2016	1,592	99.4	95.5	86.3	69.8	53.1	38.4	24.4
Economics	2017	5,261	96.1	78.3	54.0	35.1	21.9	12.8	6.8
	2016	5,196	96.2	78.5	55.1	35.6	21.2	11.8	5.7
Engineering Studies	2017	1,972	98.5	91.3	78.7	62.6	45.6	29.9	15.8
	2016	2,006	99.0	93.1	82.1	64.7	46.2	29.2	16.1
English Standard	2017	30,913	99.9	99.0	94.8	86.0	71.1	50.8	30.5
	2016	31,290	99.9	99.0	95.3	87.0	71.8	51.4	31.2
English Advanced	2017	26,779	97.4	83.3	61.6	39.7	22.1	10.5	4.1
	2016	26,080	98.0	83.4	60.6	38.7	21.4	9.9	3.7
English Extension 1	2017	4,333	95.5	71.4	38.6	17.1	5.7	2.1	0.9
	2016	4,354	94.4	67.4	37.3	17.0	6.3	2.3	0.8
English Extension 2	2017	1,672	90.7	71.0	45.5	24.0	7.1	1.3	0.4
	2016	1,619	91.0	70.9	43.8	21.2	8.5	2.5	0.6
ESL	2017	2,336	98.4	92.8	84.5	72.5	58.9	44.2	30.2
	2016	2,327	98.9	94.2	85.3	74.0	59.8	46.1	31.3
Food Technology	2017	3,305	99.9	96.6	87.5	76.8	63.9	51.7	37.2
	2016	3,535	99.9	96.1	87.4	77.8	65.8	53.0	39.0

Course	Year	Number	Percentage of students with scaled mark less than:						
			45	40	35	30	25	20	15
Geography	2017	4,589	98.3	91.2	78.0	62.1	46.9	32.9	20.5
	2016	4,283	98.5	90.7	77.8	61.7	45.9	31.6	20.1
Industrial Technology	2017	5,726	100.0	99.7	95.9	87.9	76.6	63.4	47.7
	2016	5,575	100.0	99.9	96.0	88.1	77.3	64.1	48.0
Information Processes & Technology	2017	2,684	99.4	95.1	87.6	75.7	61.3	44.4	29.6
	2016	2,778	99.4	95.5	87.0	75.3	61.6	46.6	31.7
Legal Studies	2017	10,797	98.4	90.0	77.0	61.8	46.0	31.5	19.2
	2016	10,293	98.7	90.8	78.2	63.4	47.9	33.7	21.2
Mathematics General 2	2017	31,543	99.9	96.4	87.4	74.8	60.9	45.8	30.3
	2016	31,758	99.9	97.2	87.7	74.1	59.5	44.4	29.6
Mathematics	2017	17,060	94.0	78.7	60.0	41.1	25.3	14.6	8.1
	2016	16,139	95.8	80.1	59.1	39.5	24.1	13.6	7.0
Mathematics Extension 1	2017	8,770	77.5	48.6	24.0	10.1	3.4	1.0	0.1
	2016	8,671	76.5	44.1	22.0	10.4	4.3	1.7	0.7
Mathematics Extension 2	2017	3,223	60.1	17.4	5.2	2.0	1.0	0.4	0.1
	2016	3,251	50.3	14.7	4.9	1.8	1.0	0.5	0.3
Modern History	2017	11,139	98.5	89.9	75.7	60.0	44.5	30.5	19.3
	2016	10,785	98.2	89.3	74.5	58.2	42.3	29.3	19.3
History Extension	2017	2,004	97.3	82.9	54.8	26.9	9.6	3.8	1.0
	2016	1,862	96.6	81.8	52.2	24.7	8.5	3.6	1.0
Music 1	2017	4,757	99.6	95.8	88.2	76.0	61.9	46.6	30
	2016	4,677	99.5	95.8	87.6	76.7	63.7	48.0	32.7
Music 2	2017	748	91.8	72.6	50.4	30.5	14.6	5.9	1.7
	2016	717	92.7	74.1	46.9	28.5	13.0	5.7	1.3
Music Extension	2017	409	79.7	65.3	44.7	29.3	16.9	6.4	1.7
	2016	453	82.8	68.4	48.3	23.8	9.1	2.6	0.4
PDH&PE	2017	15,679	99.8	95.2	84.8	71.2	57.1	42.5	27.5
	2016	15,498	99.6	95.2	84.4	70.8	56.1	40.3	26.2
Physics	2017	9,573	96.8	81.2	61.1	43.8	28.9	17.2	8.8
	2016	9,156	97.6	82.1	61.6	43.1	28.1	17.1	8.2
Senior Science	2017	7,061	100.0	99.2	93.6	84.1	72.4	57.0	40.5
	2016	6,656	100.0	99.0	93.5	84.8	71.8	55.5	38.9
Society & Culture	2017	4,537	98.9	93.7	84.0	70.6	55.4	38.7	24.0
	2016	4,630	99.1	93.9	82.9	68.7	54.4	38.6	23.4
Software Design & Development	2017	1,801	99.3	92.8	80.9	68.0	53.0	37.0	22.4
	2016	1,842	99.0	92.1	81.5	70.1	56.1	39.6	23.6
Studies of Religion I	2017	9,011	99.4	92.7	76.3	56.2	36.3	19.2	8.8
	2016	8,926	99.4	92.1	76.2	55.9	36.6	20.3	9.1
Studies of Religion II	2017	5,954	98.8	91.4	75.4	55.9	37.7	23.1	12.7
	2016	6,280	98.7	91.4	75.3	57.9	40.1	25.7	14.7
Textiles & Design	2017	1,471	98.2	91.8	83.5	72.6	57.8	42.6	29.7
	2016	1,515	98.0	91.8	82.1	72.6	59.1	45.4	29.7
Visual Arts	2017	9,071	99.0	94.1	85.5	73.7	60.5	45.9	31.5
	2016	8,913	98.7	93.1	84.6	73.2	60.2	45.3	30.0

Course	Year	Number	Percentage of students with scaled mark less than:						
			45	40	35	30	25	20	15
Arabic Continuers	2017	265	100.0	97.4	91.7	83.0	75.8	62.6	48.7
	2016	213	100.0	97.7	93.4	84.0	73.7	59.2	48.4
Arabic Extension	2017	109	100.0	100.0	95.4	76.1	59.6	33.0	13.8
	2016	66	100.0	98.5	98.5	83.3	62.1	37.9	16.7
Chinese Continuers	2017	128	93.8	76.6	55.5	32.8	18.8	11.7	7.0
	2016	98	92.9	65.3	50.0	29.6	19.4	13.3	5.1
Chinese & Literature	2017	721	98.2	92.8	84.7	73.0	60.1	45.6	27.2
	2016	672	99.1	95.4	85.6	72.6	60.4	44.0	28.3
Chinese in Context	2017	98	90.8	75.5	67.3	39.8	25.5	13.3	1.0
	2016	84	95.2	81.0	56.0	41.7	26.2	13.1	6.0
French Beginners	2017	538	97.8	90.3	79.7	66.9	49.8	34.9	21.6
	2016	616	97.6	91.6	81.5	64.9	48.7	33.4	21.6
French Continuers	2017	698	91.7	72.6	47.3	25.5	12.8	6.2	2.6
	2016	779	92.4	70.2	46.2	28.1	14.4	6.2	2.3
French Extension	2017	164	84.1	50.6	18.3	3.0	1.2	0.0	0.0
	2016	187	84.5	44.4	13.9	7.5	1.1	0.0	0.0
German Beginners	2017	112	96.4	91.1	78.6	50.0	39.3	25.9	15.2
	2016	113	92.9	83.2	69.9	55.8	41.6	26.5	15.0
German Continuers	2017	226	88.9	71.2	50.0	31.0	17.3	6.2	2.2
	2016	249	92.4	75.1	53.4	33.7	20.1	10.0	2.8
German Extension	2017	58	89.7	53.4	20.7	5.2	1.7	0.0	0.0
	2016	49	83.7	28.6	6.1	2.0	0.0	0.0	0.0
Indonesian Continuers	2017	74	94.6	83.8	70.3	45.9	28.4	14.9	5.4
	2016	80	96.3	81.3	66.3	48.8	25.0	13.8	2.5
Indonesian & Literature	2017	73	98.6	93.2	76.7	32.9	6.8	1.4	1.4
	2016	62	98.4	93.5	67.7	37.1	6.5	0.0	0.0
Italian Beginners	2017	339	97.3	89.4	80.2	66.7	54.3	35.4	20.9
	2016	445	97.3	91.7	81.1	69.7	51.9	38.2	23.4
Italian Continuers	2017	282	96.5	85.1	61.7	40.4	20.6	8.9	4.3
	2016	273	93.8	80.6	61.2	38.5	22.3	12.1	5.5
Italian Extension	2017	53	92.5	67.9	26.4	7.5	1.9	0.0	0.0
	2016	57	89.5	50.9	28.1	3.5	1.8	0.0	0.0
Japanese Beginners	2017	712	98.2	93.3	81.5	67.4	54.5	40.0	26.8
	2016	665	97.9	92.0	79.4	64.5	51.7	37.0	25.4
Japanese Continuers	2017	679	95.4	79.5	59.8	42.0	24.3	13.1	6.3
	2016	640	94.5	79.7	60.0	43.3	27.5	15.0	7.5
Japanese Extension	2017	162	91.4	67.9	29.6	4.9	1.2	0.0	0.0
	2016	179	92.7	67.0	27.9	5.6	2.2	0.0	0.0
Korean in Context	2017	64	92.2	85.9	76.6	62.5	42.2	28.1	20.3
	2016	54	92.6	79.6	63	50.0	22.2	11.1	5.6
Latin Continuers	2017	159	74.8	39.0	17.6	7.5	4.4	1.3	1.3
	2016	164	68.3	41.5	20.1	10.4	6.1	2.4	1.2
Latin Extension	2017	90	56.7	30.0	13.3	4.4	1.1	0.0	0.0
	2016	114	64.0	29.8	9.6	2.6	1.8	1.8	1.8

Course	Year	Number	Percentage of students with scaled mark less than:						
			45	40	35	30	25	20	15
Modern Greek Beginners	2017	84	96.4	84.5	75.0	65.5	45.2	33.3	16.7
	2016	69	98.6	88.4	72.5	58.0	46.4	36.2	26.1
Modern Greek Continuers	2017	78	93.6	88.5	75.6	64.1	55.1	35.9	23.1
	2016	97	94.8	84.5	72.2	62.9	49.5	37.1	15.5
Modern Hebrew	2017	43	83.7	62.8	39.5	20.9	4.7	0.0	0.0
	2016	46	89.1	78.3	52.2	17.4	8.7	2.2	0.0
Spanish Beginners	2017	255	96.5	87.8	76.5	61.2	46.3	32.5	18.8
	2016	147	95.2	89.1	77.6	63.9	53.1	36.1	23.1
Spanish Continuers	2017	171	95.3	87.1	79.5	63.7	48.5	35.7	19.3
	2016	147	95.9	89.8	76.9	63.3	45.6	32.7	19.7
Spanish Extension	2017	53	96.2	79.2	66.0	32.1	20.8	7.5	1.9
	2016	42	95.2	88.1	66.7	45.2	26.2	4.8	2.4
Vietnamese	2017	145	98.6	93.8	84.8	76.6	60.0	43.4	28.3
	2016	125	97.6	93.6	86.4	75.2	64.8	51.2	36.0
Automotive Exam	2017	287	100.0	100.0	98.6	93.0	86.1	74.6	59.9
	2016	333	100.0	100.0	99.7	93.7	84.7	73.9	65.2
Business Services Exam	2017	1,102	100.0	98.6	93.5	85.2	69.8	58.3	41.0
	2016	1,021	100.0	98.6	93.7	85.6	74.4	60.7	46.0
Construction Exam	2017	1,616	100.0	100.0	97.3	90.7	79.6	68.4	52.8
	2016	1,491	100.0	100.0	98.1	91.1	80.9	67.1	52.3
Electrotechnology Exam	2017	223	100.0	100.0	96.4	91.0	78.9	63.2	46.2
	2016	264	100.0	100.0	98.1	93.2	80.3	63.3	41.3
Entertainment Industry Exam	2017	941	100.0	99.1	92.1	80.2	64.2	44.6	27.8
	2016	846	100.0	95.9	90.5	79.7	64.8	47.9	26.2
Financial Services Exam	2017	81	95.1	91.4	84.0	67.9	49.4	25.9	16.0
	2016	111	98.2	90.1	78.4	62.2	45.0	22.5	9.0
Hospitality Exam	2017	5,084	100.0	98.3	93.2	84.1	73.1	57.1	38.7
	2016	4,916	100.0	98.6	93.0	84.5	71.6	55.0	38.7
Human Services Exam	2017	674	100.0	99.3	93.9	86.1	74.9	55.2	39.0
	2016	654	100.0	97.9	92.8	84.9	72.2	62.2	43.7
Information & Digital Technology Exam	2017	716	100.0	99.4	95.7	87.6	76.1	58.2	41.9
	2016	806	100.0	98.6	94.2	86.6	75.2	58.1	43.2
Metal & Engineering Exam	2017	413	100.0	100.0	97.6	91.8	84.5	70.0	54.2
	2016	492	100.0	100.0	96.3	91.9	82.9	73.6	57.3
Primary Industries Exam	2017	662	100.0	100.0	96.4	92.1	79.9	66.9	52.7
	2016	556	100.0	99.8	96.2	87.6	79.0	66.9	47.5
Retail Services Exam	2017	860	100.0	98.4	94.7	86.5	78.1	64.8	48.8
	2016	899	100.0	99.6	95.7	86.7	78.1	64.9	46.4
Tourism Travel & Events Exam	2017	274	100.0	96.7	91.2	79.9	62.8	44.2	26.3
	2016	355	100.0	99.2	94.1	85.6	69.6	48.2	32.1

Table A6 Courses that contribute to the ATAR

Notes: (i) This table shows the percentage of the course candidature who completed more than 10 units of ATAR courses for whom all units of that course contributed to their ATAR.

(ii) The **Number receiving ATAR** column shows the number of students who did the course in 2017 or a previous year, and received an ATAR in 2017.

(iii) The **ATAR students with > 10 units** columns show the number and percentage of ATAR students who completed more than 10 units of ATAR courses.

(iv) The **Percentage who counted course** column shows the percentage of ATAR students who completed more than 10 units of ATAR courses for whom all units of that course contributed towards their ATAR.

(v) The **Maximum ATAR including the course** column shows the maximum ATAR of any student doing the course in any year and including all units from that course in their ATAR calculation.

(vi) The table excludes courses with less than 10 students.

Course	Number receiving ATAR	ATAR students with > 10 units		Percentage who counted course	Maximum ATAR including the course
		Number	Percentage		
Aboriginal Studies	297	75	25	88	98.15
Agriculture	1,087	456	42	80	99.30
Ancient History	8,064	3,408	42	85	99.95
Biology	17,596	8,068	46	82	99.95
Business Studies	16,215	6,257	39	85	99.95
Chemistry	10,876	6,649	61	76	99.95
Community & Family Studies	6,781	2,126	31	88	98.35
Dance	807	256	32	66	98.70
Design & Technology	2,777	1,054	38	76	99.55
Drama	4,125	1,537	37	72	99.90
Earth & Environmental Science	1,577	608	39	84	99.75
Economics	5,228	2,917	56	77	99.95
Engineering Studies	1,896	1,042	55	71	99.80
English Standard	28,271	8,702	31	100	99.40
English Advanced	26,587	13,537	51	99	99.95
English Extension 1	4,330	2,973	69	85	99.95
English Extension 2	1,667	1,030	62	79	99.95
ESL	2,203	739	34	100	99.95
Food Technology	2,717	926	34	88	99.20
Geography	4,229	1,843	44	86	99.95
Industrial Technology	3,958	1,299	33	72	96.75
Information Processes & Technology	2,436	1,103	45	77	99.90
Legal Studies	10,284	4,422	43	85	99.95
Mathematics General 2	28,450	9,485	33	71	99.85
Mathematics	16,092	9,420	59	71	99.95
Mathematics Extension 1	8,688	6,318	73	87	99.95
Mathematics Extension 2	3,215	1,722	54	97	99.95
Modern History	10,396	4,815	46	85	99.95
History Extension	1,997	1,633	82	82	99.90
Music 1	4,023	1,486	37	64	99.80
Music 2	742	541	73	71	99.95
Music Extension	409	336	82	70	99.95
PDH&PE	14,299	5,168	36	85	99.85

Course	Number receiving ATAR	ATAR students with > 10 units		Percentage who counted course	Maximum ATAR including the course
		Number	Percentage		
Physics	9,428	5,533	59,	76	99.95
Senior Science	5,622	1,857	33	85	99.30
Society & Culture	4,249	1,435	34	84	99.95
Software Design & Development	1,672	833	50	74	99.75
Studies of Religion I	8,888	7,845	88	80	99.85
Studies of Religion II	5,853	1,825	31	86	99.95
Textiles & Design	1,287	380	30	80	99.70
Visual Arts	7,686	2,667	35	75	99.90
Arabic Continuers	224	153	68	80	98.95
Arabic Extension	99	99	100	83	92.60
Armenian	14	11	79	73	98.85
Chinese Beginners	58	18	31	50	99.70
Chinese Continuers	126	78	62	73	99.95
Chinese Extension	29	25	86	68	99.95
Chinese & Literature	711	208	29	65	99.85
Chinese in Context	94	58	62	60	99.95
Classical Greek Continuers	27	24	89	63	99.95
Classical Greek Extension	19	18	95	61	99.95
Classical Hebrew Continuers	17	10	59	90	99.85
Filipino	17	7	41	14	93.80
French Beginners	488	176	36	73	99.75
French Continuers	696	488	70	66	99.95
French Extension	170	145	85	87	99.95
German Beginners	107	44	41	64	99.00
German Continuers	219	148	68	67	99.95
German Extension	55	46	84	72	99.95
Hindi	23	16	70	56	98.80
Indonesian Beginners	28	13	46	85	97.35
Indonesian Continuers	73	45	62	64	99.25
Indonesian & Literature	72	37	51	54	98.95
Italian Beginners	306	137	45	71	99.70
Italian Continuers	275	177	64	66	99.90
Italian Extension	52	44	85	91	99.45
Japanese Beginners	668	227	34	72	99.70
Japanese Continuers	661	384	58	65	99.95
Japanese Extension	159	120	75	87	99.95
Japanese & Literature	12	3	25	33	93.75
Japanese in Context	27	7	26	57	92.90
Korean Beginners	94	35	37	74	97.60
Korean & Literature	34	5	15	60	99.70
Korean in Context	58	21	36	67	99.50
Latin Continuers	159	139	87	66	99.95
Latin Extension	91	83	91	70	99.95
Macedonian	24	15	63	73	99.45

Course	Number receiving ATAR	ATAR students with > 10 units		Percentage who counted course	Maximum ATAR including the course
		Number	Percentage		
Modern Greek Beginners	78	33	42	64	97.40
Modern Greek Continuers	66	46	70	74	96.50
Modern Greek Extension	33	29	88	90	96.50
Modern Hebrew	35	20	57	45	99.00
Persian	26	14	54	64	98.25
Polish	26	14	54	64	99.35
Portuguese	14	5	36	100	93.15
Punjabi Continuers	18	16	89	69	99.55
Russian	19	4	21	50	91.85
Serbian	21	16	76	63	96.60
Spanish Beginners	235	95	40	76	99.65
Spanish Continuers	158	88	56	74	99.35
Spanish Extension	51	42	82	88	97.85
Tamil	25	22	88	45	99.50
Turkish	30	13	43	38	94.55
Vietnamese	132	53	40	60	99.15
Automotive Exam	170	79	46	61	91.35
Business Services Exam	939	345	37	76	96.80
Construction Exam	1,098	365	33	79	94.70
Electrotechnology Exam	153	58	38	62	88.65
Entertainment Industry Exam	825	268	32	79	95.65
Financial Services Exam	78	27	35	74	97.60
Hospitality Exam	4,449	1,566	35	77	98.55
Human Services Exam	596	210	35	77	98.75
Information & Digital Technology Exam	653	254	39	74	95.40
Metal & Engineering Exam	252	132	52	58	84.80
Primary Industries Exam	459	183	40	70	93.35
Retail Services Exam	661	246	37	61	93.65
Tourism Travel & Events Exam	235	72	31	63	94.25

Table A7 ATAR distribution

Notes: (i) This table shows the number of students receiving each ATAR from 99.95 to 99.00 and the number corresponding to the stated ATAR ranges down to 30.00–30.95.

(ii) The median ATAR in 2017 was 68.65.

ATAR	Number	Number on or above	Percentage on or above
99.95	46	46	0.1
99.90	46	92	0.2
99.85	46	138	0.2
99.80	48	186	0.3
99.75	42	228	0.4
99.70	51	279	0.5
99.65	48	327	0.6
99.60	45	372	0.7
99.55	47	419	0.7
99.50	48	467	0.8
99.45	47	514	0.9
99.40	47	561	1.0
99.35	43	604	1.1
99.30	47	651	1.1
99.25	48	699	1.2
99.20	46	745	1.3
99.15	45	790	1.4
99.10	49	839	1.5
99.05	43	882	1.5
99.00	50	932	1.6
99.00 – 99.95	932	932	1.6
98.00 – 98.95	932	1,864	3.3
97.00 – 97.95	929	2,793	4.9
96.00 – 96.95	938	3,731	6.5
95.00 – 95.95	929	4,660	8.2
94.00 – 94.95	948	5,608	9.8
93.00 – 93.95	937	6,545	11.5
92.00 – 92.95	931	7,476	13.1
91.00 – 91.95	939	8,415	14.7
90.00 – 90.95	934	9,349	16.4
89.00 – 89.95	912	10,261	18.0
88.00 – 88.95	940	11,201	19.6
87.00 – 87.95	946	12,147	21.3
86.00 – 86.95	927	13,074	22.9
85.00 – 85.95	933	14,007	24.5
84.00 – 84.95	923	14,930	26.2
83.00 – 83.95	933	15,863	27.8
82.00 – 82.95	924	16,787	29.4
81.00 – 81.95	927	17,714	31.0
80.00 – 80.95	921	18,635	32.7
79.00 – 79.95	912	19,547	34.3
78.00 – 78.95	926	20,473	35.9

ATAR	Number	Number on or above	Percentage on or above
77.00 – 77.95	899	21,372	37.5
76.00 – 76.95	918	22,290	39.1
75.00 – 75.95	914	23,204	40.7
74.00 – 74.95	904	24,108	42.2
73.00 – 73.95	900	25,008	43.8
72.00 – 72.95	894	25,902	45.4
71.00 – 71.95	889	26,791	47.0
70.00 – 70.95	895	27,686	48.5
69.00 – 69.95	892	28,578	50.1
68.00 – 68.95	872	29,450	51.6
67.00 – 67.95	860	30,310	53.1
66.00 – 66.95	875	31,185	54.7
65.00 – 65.95	878	32,063	56.2
64.00 – 64.95	844	32,907	57.7
63.00 – 63.95	851	33,758	59.2
62.00 – 62.95	836	34,594	60.6
61.00 – 61.95	843	35,437	62.1
60.00 – 60.95	823	36,260	63.5
59.00 – 59.95	811	37,071	65.0
58.00 – 58.95	808	37,879	66.4
57.00 – 57.95	788	38,667	67.8
56.00 – 56.95	798	39,465	69.2
55.00 – 55.95	774	40,239	70.5
54.00 – 54.95	762	41,001	71.9
53.00 – 53.95	748	41,749	73.2
52.00 – 52.95	745	42,494	74.5
51.00 – 51.95	740	43,234	75.8
50.00 – 50.95	706	43,940	77.0
49.00 – 49.95	694	44,634	78.2
48.00 – 48.95	699	45,333	79.4
47.00 – 47.95	672	46,005	80.6
46.00 – 46.95	668	46,673	81.8
45.00 – 45.95	644	47,317	82.9
44.00 – 44.95	618	47,935	84.0
43.00 – 43.95	617	48,552	85.1
42.00 – 42.95	597	49,149	86.1
41.00 – 41.95	571	49,720	87.1
40.00 – 40.95	552	50,272	88.1
39.00 – 39.95	531	50,803	89.0
38.00 – 38.95	525	51,328	90.0
37.00 – 37.95	497	51,825	90.8
36.00 – 36.95	471	52,296	91.6
35.00 – 35.95	445	52,741	92.4
34.00 – 34.95	434	53,175	93.2
33.00 – 33.95	404	53,579	93.9
32.00 – 32.95	382	53,961	94.6
31.00 – 31.95	353	54,314	95.2
30.00 – 30.95	331	54,645	95.8

Table A8 ATAR percentiles, 2013–2017

Note: This table shows the ATAR at selected percentiles of the ATAR cohort.

Percentile	ATAR 2013	ATAR 2014	ATAR 2015	ATAR 2016	ATAR 2017
100	99.95	99.95	99.95	99.95	99.95
99	99.40	99.35	99.40	99.40	99.35
98	98.80	98.75	98.75	98.75	98.75
95	97.00	96.95	96.95	96.95	96.90
90	94.00	93.95	93.95	93.95	93.85
85	91.00	90.90	90.90	90.90	90.80
80	88.00	87.85	87.85	87.85	87.75
75	84.95	84.80	84.75	84.75	84.70
70	81.90	81.70	81.65	81.60	81.60
60	75.70	75.40	75.25	75.25	75.40
50	69.20	68.95	68.70	68.65	69.00
40	62.40	62.15	61.70	61.65	62.40
30	54.90	54.70	54.05	53.95	55.35

Table A9 Relationship between ATAR and aggregates, 2013–2017

Note: This table shows the lowest aggregate of scaled marks corresponding to each of the selected ATARs.

ATAR	Lowest aggregate				
	2013	2014	2015	2016	2017
99.95	477.9	475.3	478.1	476.6	477.1
99.50	455.0	454.0	457.9	455.8	457.1
99.00	443.8	444.5	446.9	446.0	446.6
98.00	429.5	431.2	432.4	431.2	432.2
95.00	402.6	404.4	404.2	403.8	404.1
90.00	371.3	372.2	371.2	371.7	372.4
85.00	344.8	345.1	343.8	345.3	344.8
80.00	321.3	320.6	319.9	320.6	319.9
75.00	297.9	296.9	297.0	297.5	296.2
70.00	276.1	275.0	274.8	275.1	273.3
65.00	253.5	253.3	253.1	253.4	249.4
60.00	232.2	231.9	231.4	231.4	226.6
55.00	211.3	210.8	211.4	210.9	204.2
50.00	191.3	189.9	191.9	191.4	182.0

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IMAGES

Kat Stanley Photography

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