REPORT ON THE SCALING OF THE 2018 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 2018.

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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 the 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 the 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 2018, 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 2013 Year 7 students completed Year 12 and were eligible for an ATAR in 2018.

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 2018 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 2018

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.

3 CALCULATING THE ATAR IN 2018

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 2018 there were 26,343 different enrolment patterns for ATAR eligible students; only 227 of these 26,343 combinations were completed by 20 or more students and 18,990 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 2018

The scaling procedure used to produce the aggregates in 2018 was unchanged from that used in 2017.

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.

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

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.

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 2018 the maximum possible scaled mark in a course was given by the smaller of 50 and the scaled mean + 2.48 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 2.48 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 2018 there were 4,483 distinct aggregates. There are a large number of tied results with some aggregates shared by 30 or more 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 2018 ATAR cohort. From the table, it can be seen that, for example, 77.1 per cent of the 2018 ATAR cohort received an aggregate mark of 350 or less.

Table 3.1   ATAR-eligible percentiles corresponding to selected aggregates in 2018

Aggregate	ATAR-eligible percentile
450.0	98.8
400.0	91.0
350.0	77.1
300.0	60.5
250.0	43.5
200.0	28.0
150.0	14.8

3.2.9 Calculating the ATAR

In 2018 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 from 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 2018 the participation rate in NSW, determined using ABS data, was 59.8 per cent, down from 61.0 per cent in 2017.

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 2018, the value of α in NSW was 0.30.

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 2018 this target frequency for an ATAR of 99.95 was N = 46.

With the 2018 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 94.5% 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.
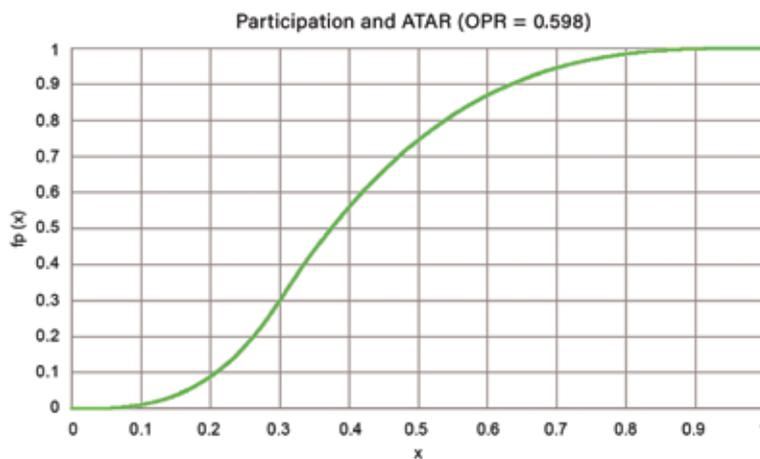
Figure 3.1 Percentage of ATAR-eligible students in each ATAR truncated category in 2018

The relationship between the ATAR and ATAR-eligible percentile in 2018 is shown in Figure 3.2.
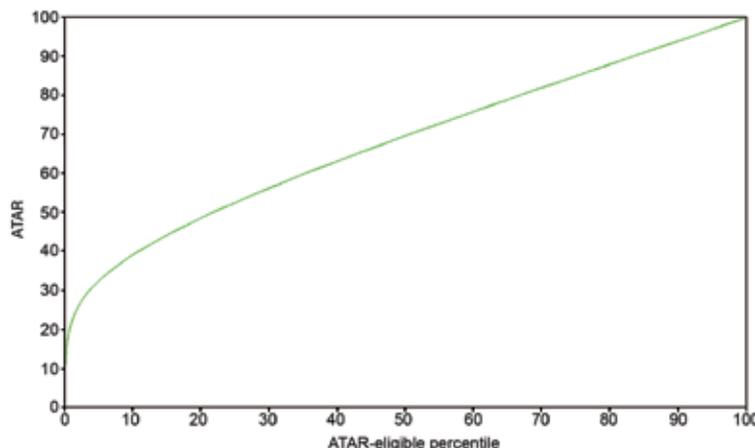
Figure 3.2 The relationship between ATAR and ATAR-eligible percentile in 2018

The relationship between aggregates and ATARs in 2018 is shown graphically in Figure 3.3.

Figure 3.3　Relationship between aggregate and ATAR in 2018
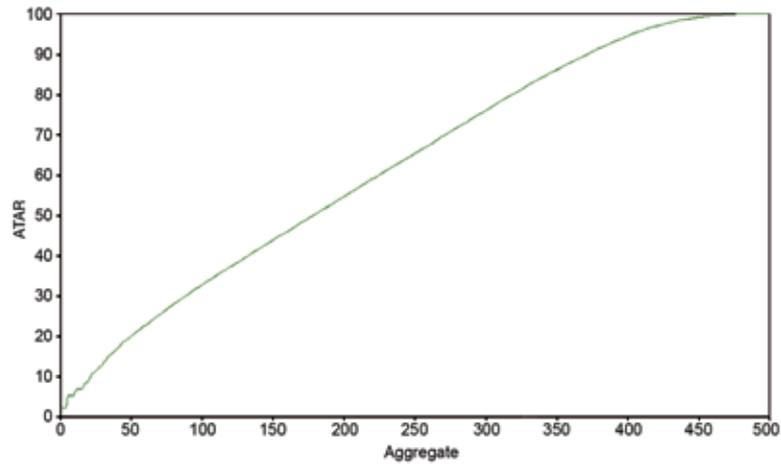
Each ATAR corresponds to a range of aggregate marks. The range of aggregates corresponding to one ATAR is greatest in the extremes of the distribution of aggregates and smallest near the middle of the distribution of aggregates. Table 3.2 gives ATARs for selected aggregates based on the 2018 data.

Table 3.2　Relationship between aggregate and ATAR in 2018

Aggregate	ATAR
450.0	99.25
400.0	94.60
350.0	86.25
300.0	76.15
250.0	65.40
200.0	54.75
150.0	43.90

4 THE HSC AND ATAR IN 2018 – SOME RESULTS

4.1 OVERVIEW

A total of 75,409 students completed at least one HSC course in 2018, but 4,002 were removed from the database as they completed no ATAR course. Of the remaining pool of 71,407 students, 90.8 per cent received an HSC and 78.6 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, 93.1 per cent of those receiving an ATAR in 2018 included only 2018 courses in their aggregate.

The percentage of students enrolled in at least one ATAR course who were female was 52.3 per cent, and 53.7 per cent of students who received an ATAR were female. Neither figure changed from the previous year.

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 2018 there were 8,743 such students.

Table 4.1 Proportion of students receiving an ATAR, 2014–2018

Year	HSC candidature	Students receiving an ATAR	
		Number	%
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
2018	71,407	56,127	78.6

4.3 NUMBER OF UNITS OF ATAR COURSES COMPLETED

The pattern in 2018 was similar to that observed in 2017, with 48.3 per cent completing exactly 10 ATAR units and 30.4 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, 2015–2018

Number of units	2015 %	2016 %	2017 %	2018	
				%	Number
1	0.5	0.5	0.5	0.6	395
2	7.6	7.3	7.4	7.4	5,292
3	0.5	0.6	0.6	0.6	428
4	5.3	5.1	4.9	4.7	3,354
5	0.1	0.1	0.1	0.1	68
6	5.1	5.2	4.8	4.8	3,433
7	0.2	0.1	0.1	0.1	76
8	3.2	3.0	2.8	2.8	2,025
9	0.2	0.1	0.1	0.1	60
10	45.6	46.3	47.1	48.3	34,477
11	17.2	17.3	17.2	16.8	12,024
12	12.8	12.6	12.7	12.1	8,629
13	1.3	1.4	1.3	1.3	935
14	0.3	0.3	0.3	0.2	178
15+	0.1	0.1	0.1	0.0	27
HSC cohort	72,238	72,014	72,708		71,401

[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 2018, the number who received an ATAR in 2018, 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 2018 as well as those who completed the course in previous years and completed at least one ATAR course in 2018. 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 18,485 students enrolled in at least one VET course, of which 11,876 students enrolled in a VET examination course. The proportion taking a VET examination course (64.2%) is lower than the corresponding proportion for 2017 (65.6%).

Overall, 78.6 per cent of the 2018 HSC cohort received ATARs but the percentage varied across courses, from 51.5 per cent to 99.6 per cent for Category A courses with candidatures exceeding 100. For students enrolled in any VET courses, the overall figure was 51.4 per cent but was higher, 79.4 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 2018. 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 2017 shows that distributions of HSC marks have 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 or courses in which all the students have a total of less than 25 results from other current year scaling courses. 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 2018 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 47.0. Students with a History Extension HSC mark of 47.0 in fact corresponded to the scaled mark percentile range 88.9 to 95.6.

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 47.0.

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 47.7. 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 Ancient History, ESL and PDH&PE.

Table 4.3   Scaled marks for selected percentiles

Course	Scaled mean	Scaled mark for	
		P90	P50
Ancient History	36.6	44.5	37.5
ESL	22.7	37.6	22.6
PDH&PE	22.8	37.4	22.3

ESL and PDH&PE have similar scaled means and the similar scaled marks corresponding to the 90th percentile. Ancient History 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 ESL and PDH&PE candidatures have similar scaled marks for those courses to the middle candidate in Ancient History.

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; 1.7 per cent of the 2018 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 2013 Year 7 cohort if all those students continued to Year 12 and had been eligible for an ATAR in 2018. From Table 4.4 we see that in 2018 16.7 per cent of the ATAR-eligible students received an ATAR of 90.00 or above and 33.3 per cent gained an ATAR of 80.00 and above.

Table 4.4   Percentage of ATAR students receiving specific ATARs and above, 2014–2018

ATAR	2014 %	2015 %	2016 %	2017 %	2018 %
99.00	1.7	1.7	1.7	1.6	1.7
95.00	8.3	8.3	8.3	8.2	8.3
90.00	16.5	16.5	16.5	16.4	16.7
80.00	32.8	32.7	32.6	32.7	33.3
70.00	48.4	48.1	48.0	48.5	49.5
60.00	63.0	62.4	62.3	63.5	64.6
50.00	75.8	74.8	74.7	77.0	78.2

Table 4.5   Median ATAR, 2014–2018

Year	Median ATAR all students	Median ATAR female	Median ATAR male
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
2018	69.65	71.10	67.80

Table 4.5 shows the median ATAR and the median ATAR for male and female candidates for the years 2014–2018.

In 2018, 46 students received the top ATAR of 99.95. They comprised 27 males and 19 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 2018 received an ATAR of 94.00 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, 2014–2018**

ATAR	% female 2014	% female 2015	% female 2016	% female 2017	% female 2018
99.00	46.5	50.2	45.9	44.2	45.9
98.00	48.3	52.1	47.2	46.6	51.0
95.00	51.3	54.1	52.2	51.1	55.4
90.00	53.8	56.2	54.4	53.6	58.0
80.00	55.2	57.1	56.7	55.5	58.5
70.00	55.4	56.4	56.3	55.7	53.2
60.00	55.2	55.5	55.5	55.4	53.5
50.00	54.7	54.9	54.8	55.0	48.0
40.00	54.2	54.3	54.3	54.5	50.4
30.00	53.7	53.8	53.9	54.0	47.6
Total cohort	**53.1**	**53.0**	**53.3**	**53.7**	**53.7**

In 2018, the HSC-aged population of NSW was 94,081, of whom 45,648 (48.5%) were female. If there were no gender based difference in HSC participation and performance, one would therefore expect 48.5% of the candidates with a particular scaled score to be female. The solid line in Figure 4.1 shows the number of female students on each aggregate score (smoothed by taking a moving average), while the dotted line shows the expected number (48.5% of the total number of students with that aggregate score.)

It is evident from Figure 4.1 that the number female students on a particular scaled score is in very close agreement with this expected number for scaled scores above 430 (ATAR 98.0) and below 143 (ATAR 42.5), indicating that participation and performance at the top and bottom of the scale is not significantly influenced by gender. However, there are considerably more females than would be expected given their proportion in the HSC-aged population on almost every scaled score between 143 and 430, reflecting higher retention rates and better performance for females in this range.

**Figure 4.1   Number of females on each scaled score compared with the expected number
if there were no gender-based differences in participation or performance**
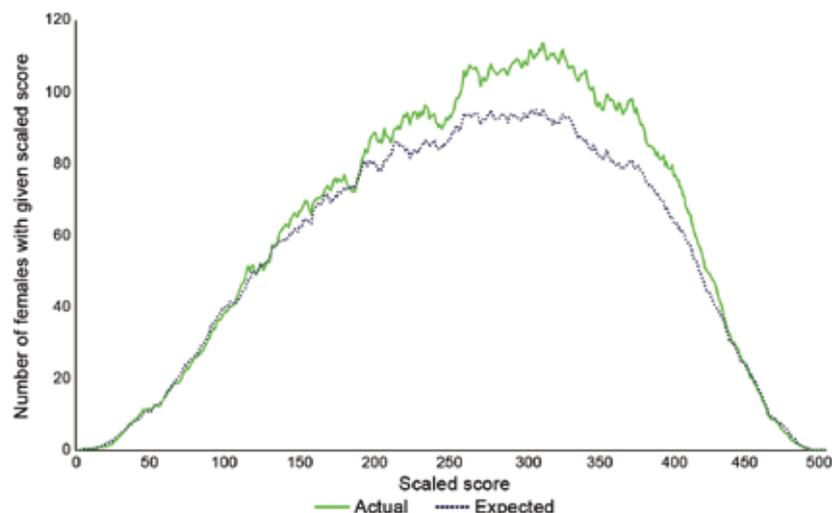
4.10 UNIVERSITY OFFERS

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 56,127 students who received an ATAR in 2018, 75.4 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 4.7 Applicants for university places by ATAR – domestic and international

ATAR band	Total number of students	Applicants	
		Number	Percentage[1]
90.00 – 99.95	9,371	9,164	97.8
80.00 – 89.95	9,310	8,728	93.7
70.00 – 79.95	9,080	7,960	87.7
60.00 – 69.95	8,523	6,670	78.3
50.00 – 59.95	7,609	4,913	64.6
Below 50.00	12,234	4,908	40.1
Total	56,127	42,343	75.4

[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, 94.1 per cent were made at least one offer of a place. Of these applicants receiving at least one offer, 64.4 per cent had an ATAR of 70 and above, and 90.4 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 2018 and 2017. 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 2018 and 2017. 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 distributions 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, 2017 and 2018, on a one-unit basis**

Mark	Year	Number	Percentage of students with mark less than:				
			45	40	35	30	25
HSC mark	2018	8,299	91	63.2	29.5	6.6	1.0
	2017	9,011	84.5	50	17.8	4.3	0.5
Scaled mark	2018	8,299	99.4	91.9	76.2	56.00	35.2
	2017	9,011	99.4	92.7	76.3	56.2	36.3

Taken together, the data indicate that the 2018 candidature in Studies of Religion I performed better than the corresponding cohort in 2017 in terms of the performance standards for Studies of Religion I. However, their overall performance as judged by their scaled marks is almost the same.

5.2 DISTRIBUTIONS OF ENGLISH AND MATHEMATICS MARKS, 2015–2018

Because all students study English, and most study Mathematics, comparative data is shown for English and Mathematics courses for the four years, 2015 to 2018. Table 5.4 shows the distributions of HSC marks and Table 5.5 shows the distributions of scaled marks.

Compared to 2017, there were slightly fewer students completing English Extension 1 and English Extension 2 in 2018. By comparison, the number of students completing the non-ATAR course English Studies is growing. In 2018 there were 6,765 candidates who completed English Studies. These students were not ATAR eligible.

In 2018, 14.6 per cent of ATAR eligible students did not complete a mathematics course and 21.6 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, 2018

Course	Number	Median HSC mark	Median band	Percentage of students in Performance Band				
				6	5	4	3	2
Mathematics – 2 unit only	12,104	75	4	12	25	32	20	8

Table 5.3 Descriptive statistics for of HSC and scaled marks for Mathematics 2 unit only candidates, 2018

Course	Number	Type of mark	Mean	SD	Max. mark	P99	P90	P75	P50	P25
Mathematics – 2 unit only	12,104	HSC	37.3	6.4	50.0	48.5	45.0	42.0	37.5	33.5
		scaled	28.2	9.2	50.0	46.4	39.7	34.7	29.0	22.4

Table 5.4   Distributions of HSC marks for English and Mathematics courses, 2015–2018

	Year	Enrolment	Percentage of students with HSC mark less than:				
			45	40	35	30	25
English Standard	2018	30,558	99.1	84.8	49.4	15.1	3.1
	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
English Advanced	2018	26,127	86.2	37.3	9.5	1.4	0.2
	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
English Extension 1	2018	4,064	62.1	21.6	4.3	0.7	0.2
	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
English Extension 2	2018	1,525	83.3	59.9	28.6	6.3	1.0
	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
ESL	2018	2,311	96.9	74.4	43.1	15.3	3.9
	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
Mathematics General 2	2018	30,824	93.4	73.1	46.9	20.1	5.4
	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
Mathematics	2018	17,825	77.5	48.1	22.1	7.4	2.0
	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
Mathematics Extension 1	2018	9,021	67.1	40.4	20.1	9.5	3.6
	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
Mathematics Extension 2	2018	3,164	66.8	34.3	14.4	5.9	2.1
	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

Table 5.5   Distributions of scaled marks for English and Mathematics courses, 2015–2018

	Year	Enrolment	Percentage of students with scaled mark less than:					
			45	40	35	25	20	
English Standard	2018	30,558	99.9	98.9	95.1	85.9	70.0	50.4
	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
English Advanced	2018	26,127	98.0	84.2	61.2	38.6	21.3	9.8
	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
English Extension 1	2018	4,064	95.2	71.8	39.6	18.5	6.0	2.0
	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
English Extension 2	2018	1,525	91.2	72.4	48.0	23.7	7.5	2.2
	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
ESL	2018	2,311	99.0	93.8	84.0	71.6	56.0	42.3
	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
Mathematics General 2	2018	30,824	99.8	95.5	86.6	75.0	61.8	47.2
	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
Mathematics	2018	17,825	96.4	81.5	60.5	40.5	24.0	13.2
	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
Mathematics Extension 1	2018	9,021	78.8	45.6	21.4	9.9	3.9	1.5
	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
Mathematics Extension 2	2018	3,164	52.5	13.7	4.6	1.5	0.7	0.3
	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

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 2018 34,342 students out of the 56,127 ATAR eligible students (61.2%) 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 2018.
– 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 108 courses listed in Table A6, 74 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 69.65 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

ATAR	Liam Course	HSC mark per course	HSC mark per unit		ATAR	Kellie Course	HSC mark per course	HSC mark per unit
54.30	Dance	79	39.5		80.75	Chemistry	76	38
	English Standard	70	35			Economics	78	39
	Music 1	82	41			English Advanced	82	41
	Society & Culture	78	39			Mathematics	81	40.5
	Visual Arts	79	39.5			Physics	74	37

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 21.9, 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 219, 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				Amy			
ATAR	Course	HSC mark per course	HSC mark per unit	ATAR	Course	HSC mark per course	HSC mark per unit
65.00	English Standard	79	39.5	75.00	Biology	79	39.5
	Info Processes & Tech	77	38.5		Chemistry	76	38.0
	Mathematics General 2	71	35.5		English Advanced	76	38.0
	Senior Science	77	38.5		Mathematics	77	38.5
	Society & Culture	78	39.0		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 21.0, whereas for the average scaled mean for the courses taken by Amy is 30.7.

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	33	40.0	66
Business Studies	35.0	37	40.0	66
English Advanced	35.0	11	40.0	42
Mathematics	35.0	24	40.0	51
Modern History	35.0	30	40.0	62
Visual Arts	35.0	10	40.0	52
ATAR	**57.90**		**78.15**	

Their HSC marks per unit in each course differ by only 5, yet their ATARs differ by 20.25. 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 2017. 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 2010 to 2018.

Table 6.4   ATARs for Fred and Laura, 2010–2018

Year	Fred	Laura
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
2018	57.90	78.15

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	P_{90} Scaled mark
Ancient History	8,177	23.3	11.1	44.5	38.4
Biology	18,105	26.3	10.0	44.5	39.2
Business Studies	17,611	24.0	10.8	44.5	38.5
PDH&PE	15,986	22.8	10.6	44.0	37.4
Physics	9,454	30.5	9.6	44.5	42.2

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 46.5 per unit in Earth & Environmental Science and Mathematics. The student in Earth & Environmental Science is at the 99th percentile and gains a scaled mark of 44.1, whereas the student in Mathematics is at the 90th percentile and gets a scaled mark of 42.4. Therefore, even though the scaled mean for Mathematics (31.2) is much higher than the scaled mean for Earth & Environmental Science (24.2), the difference in position compensates for this and the Earth & Environmental Science 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
Earth & Environmental Science	24.2	10.3	P99	46.5	44.1
Mathematics	31.2	9.4	P90	46.5	42.4

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

Course	Scaled mean	Scaled SD	P_{90}	
			HSC mark per unit	Scaled mark
Dance	22.9	12.1	45.5	39.4
Society & Culture	23.2	10.6	45.5	37.5

Consider students at the 90th percentile of Dance with a HSC mark of 45.5 per unit and scaled mark of 39.4 per unit and at the 90th percentile of Society & Culture with a HSC mark of 45.5 and scaled mark of 37.5. Society & Culture has a scaled mean of 23.2 whereas Dance has a scaled mean of 22.9.

The course with the lower scaled mean has the higher scaled mark corresponding to the HSC mark of 45.5 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). Society & Culture has SD 10.6 but Dance has SD 12.1. Dance has a candidature with more varied academic ability than Society & Culture.

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 49.5 in Italian Beginners received scaled marks from 50.0 to 49.3. The top HSC mark in a course does not necessarily reflect the top raw mark in a course and so a candidate with the top HSC mark in the course 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 courses 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 selection rank adjustments, does my ATAR change?

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

If selection rank adjustments don't increase my ATAR, then how do they work?

Universities allocate selection rank adjustments 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 selection rank adjustments 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 adjustments to you for a particular course then your selection rank for that preference is your ATAR plus adjustments.

7 APPENDIX

The following courses are not included in Tables A2 to A5 in the Appendix as they had less than 10 students in 2018:
– 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, gender, ATAR eligibility and maximum ATAR by course**
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: 2017–2018**
Excludes courses with less than 40 students in either year.

Table A5   **Distributions of scaled marks by course: 2017–2018**
Excludes courses with less than 40 students in either year.

Table A6   **Courses that contribute to the ATAR (more than 10 units)**
Excludes courses with less than 10 students.

Table A7   **ATAR distribution**

Table A8   **ATAR percentiles: 2014–2018**

Table A9   **Relationship between the ATAR and aggregates: 2014–2018**

Table A1 Course enrolments, gender, ATAR eligibility and maximum ATAR by course

Notes:
(i) The **Number all** column includes students who have completed the course in 2018 or in a previous year (and who have done at least one ATAR course in 2018).

(ii) The **Number HSC** column shows the number of students who completed the course in 2018 or in a previous year and received an HSC award in 2018.

(iii) The **Number ATAR** column shows the number of students who completed the course in 2018 or in a previous year and who were eligible for an ATAR in 2018.

(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 2018.

(vi) The **% ATAR eligible** column shows the percentage of students in the course who were eligible for an ATAR in 2018.

(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	689	588	355	74.2	85.3	51.5	99.85
Agriculture	1,461	1,381	1,042	53.7	94.5	71.3	99.95
Ancient History	8,335	8,104	7,432	58.0	97.2	89.2	99.95
Biology	18,522	18,028	17,489	62.8	97.3	94.4	99.95
Business Studies	18,033	17,547	16,397	45.3	97.3	90.9	99.95
Chemistry	11,375	11,142	11,095	46.5	98.0	97.5	99.95
Community & Family Studies	8,133	7,942	6,621	91.3	97.7	81.4	99.65
Dance	967	920	811	93.5	95.1	83.9	99.35
Design & Technology	3,382	3,216	2,847	44.1	95.1	84.2	99.30
Drama	4,345	4,203	3,733	66.1	96.7	85.9	99.95
Earth & Environmental Science	1,625	1,577	1,444	48.1	97.0	88.9	99.90
Economics	5,228	5,180	5,145	34.0	99.1	98.4	99.95
Engineering Studies	2,055	2,006	1,941	7.3	97.6	94.5	99.90
English Standard	31,052	30,215	27,992	49.5	97.3	90.1	99.40
English Advanced	26,302	26,068	25,973	58.6	99.1	98.7	99.95
English Extension 1	4,078	4,065	4,061	69.1	99.7	99.6	99.95
English Extension 2	1,528	1,525	1,522	72.5	99.8	99.6	99.95
ESL	2,329	2,256	2,162	53.6	96.9	92.8	99.95
Food Technology	3,188	3,079	2,475	73.0	96.6	77.6	99.50
Geography	4,523	4,433	4,097	47.3	98.0	90.6	99.95
Industrial Technology	5,770	5,539	3,858	15.0	96.0	66.9	98.40
Information Processes & Technology	2,736	2,495	2,275	19.7	91.2	83.2	99.95
Legal Studies	10,511	10,256	9,815	63.1	97.6	93.4	99.95
Mathematics General 2	31,397	30,667	27,797	50.9	97.7	88.5	99.65
Mathematics	18,578	16,990	16,931	47.7	91.5	91.1	99.95
Mathematics Extension 1	9,405	8,988	8,987	42.8	95.6	95.6	99.95
Mathematics Extension 2	3,227	3,186	3,186	36.0	98.7	98.7	99.95
Modern History	11,271	11,019	10,300	52.1	97.8	91.4	99.95
History Extension	1,795	1,784	1,779	64.7	99.4	99.1	99.95
Music 1	4,549	4,373	3,733	50.3	96.1	82.1	99.70
Music 2	784	743	740	51.5	94.8	94.4	99.95
Music Extension	454	446	444	51.5	98.2	97.8	99.95
PDH&PE	16,206	15,839	14,467	55.1	97.7	89.3	99.95
Physics	9,643	9,497	9,425	24.2	98.5	97.7	99.95
Senior Science	6,629	6,465	5,175	47.4	97.5	78.1	99.95

Course	Number all	Number HSC	Number ATAR	% Female	% HSC	% ATAR eligible	Maximum ATAR
Society & Culture	4,622	4,479	4,157	80.9	96.9	89.9	99.85
Software Design & Development	1,789	1,706	1,602	11.2	95.4	89.5	99.95
Studies of Religion I	8,720	8,233	8,130	54.3	94.4	93.2	99.95
Studies of Religion II	6,298	6,060	5,944	63.9	96.2	94.4	99.90
Textiles & Design	1,478	1,446	1,237	98.4	97.8	83.7	99.45
Visual Arts	8,902	8,574	7,424	72.7	96.3	83.4	99.90
Arabic Continuers	251	244	213	65.3	97.2	84.9	96.90
Arabic Extension	97	95	84	66.0	97.9	86.6	93.00
Armenian	41	31	31	53.7	75.6	75.6	93.15
Chinese Beginners	47	47	46	57.4	100.0	97.9	98.60
Chinese Continuers	173	165	165	52.0	95.4	95.4	99.90
Chinese Extension	34	34	34	50.0	100.0	100.0	99.90
Chinese & Literature	625	612	609	56.5	97.9	97.4	99.90
Chinese in Context	126	126	124	63.5	100.0	98.4	99.85
Classical Greek Continuers	18	18	18	16.7	100.0	100.0	99.95
Classical Greek Extension	15	15	15	6.7	100.0	100.0	99.95
Classical Hebrew Continuers	24	19	19	75.0	79.2	79.2	99.55
Classical Hebrew Extension	14	12	12	71.4	85.7	85.7	98.50
French Beginners	490	484	438	78.4	98.8	89.4	98.65
French Continuers	679	629	625	70.8	92.6	92.0	99.95
French Extension	154	150	149	59.7	97.4	96.8	99.95
German Beginners	114	111	104	57.0	97.4	91.2	98.80
German Continuers	203	189	189	63.5	93.1	93.1	99.95
German Extension	44	43	43	59.1	97.7	97.7	99.95
Hindi	31	25	25	51.6	80.6	80.6	99.75
Indonesian Beginners	45	45	41	62.2	100.0	91.1	99.40
Indonesian Continuers	62	62	61	69.4	100.0	98.4	99.70
Indonesian Extension	16	16	16	75.0	100.0	100.0	99.70
Indonesian & Literature	41	41	41	58.5	100.0	100.0	98.45
Italian Beginners	320	317	292	75.9	99.1	91.3	99.60
Italian Continuers	257	230	225	63.8	89.5	87.5	99.85
Italian Extension	61	60	59	59.0	98.4	96.7	99.65
Japanese Beginners	727	711	687	57.9	97.8	94.5	99.95
Japanese Continuers	706	668	658	65.9	94.6	93.2	99.95
Japanese Extension	161	154	154	68.3	95.7	95.7	99.80
Japanese in Context	31	31	30	67.7	100.0	96.8	92.70
Khmer	18	17	17	66.7	94.4	94.4	85.90
Korean Beginners	97	95	95	86.6	97.9	97.9	96.05
Korean Continuers	14	14	14	92.9	100.0	100.0	95.50
Korean & Literature	40	39	38	65.0	97.5	95.0	98.75
Korean in Context	62	61	61	69.4	98.4	98.4	99.05
Latin Continuers	157	155	155	42.7	98.7	98.7	99.95
Latin Extension	94	94	94	38.3	100.0	100.0	99.95
Macedonian	20	20	18	65.0	100.0	90.0	98.15
Modern Greek Beginners	79	79	73	50.6	100.0	92.4	98.00
Modern Greek Continuers	113	90	87	63.7	79.6	77.0	99.60
Modern Greek Extension	53	45	45	71.7	84.9	84.9	99.40

Course	Number all	Number HSC	Number ATAR	% Female	% HSC	% ATAR eligible	Maximum ATAR
Modern Hebrew	52	46	46	61.5	88.5	88.5	99.55
Persian	21	20	20	57.1	95.2	95.2	96.95
Polish	17	15	15	64.7	88.2	88.2	96.80
Portuguese	13	13	11	61.5	100.0	84.6	78.80
Punjabi Continuers	12	12	12	58.3	100.0	100.0	94.95
Russian	21	21	21	57.1	100.0	100.0	93.85
Serbian	24	23	23	54.2	95.8	95.8	92.50
Spanish Beginners	207	203	188	74.4	98.1	90.8	99.85
Spanish Continuers	134	129	123	69.4	96.3	91.8	98.65
Spanish Extension	44	42	40	56.8	95.5	90.9	94.80
Swedish	17	7	7	76.5	41.2	41.2	96.70
Tamil	57	28	26	68.4	49.1	45.6	99.00
Turkish	45	31	31	75.6	68.9	68.9	97.85
Vietnamese	144	139	134	62.5	96.5	93.1	98.60
Automotive Exam	215	193	122	5.1	89.8	56.7	91.70
Business Services Exam	1,116	1,029	879	75.4	92.2	78.8	97.25
Construction Exam	1,555	1,468	1,024	4.8	94.4	65.9	95.40
Electrotechnology Exam	225	217	156	2.2	96.4	69.3	93.0
Entertainment Industry Exam	822	811	706	53.5	98.7	85.9	97.70
Financial Services Exam	63	59	56	30.2	93.7	88.9	96.35
Hospitality Exam	5,013	4,722	4,207	73.2	94.2	83.9	98.75
Human Services Exam	676	660	590	91.4	97.6	87.3	96.85
Information & Digital Technology Exam	623	579	505	13.0	92.9	81.1	97.45
Metal & Engineering Exam	369	331	204	5.1	89.7	55.3	95.10
Primary Industries Exam	590	493	367	54.7	83.6	62.2	91.30
Retail Services Exam	914	777	651	71.2	85.0	71.2	97.75
Tourism, Travel & Events Exam	226	225	188	91.2	99.6	83.2	90.90
Total	71,401	64,862	56,127	52.3	90.8	78.6	99.95

Table A2 Distributions of 2018 HSC marks by course

Notes: (i) The **Number** column shows the number of students who completed the course in 2018.

(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	625	67	3	10	14	20	21	27
Agriculture	1,396	74	4	7	26	29	20	12
Ancient History	8,177	75	4	10	27	27	22	11
Biology	18,105	76	4	9	28	33	20	6
Business Studies	17,611	75	4	8	29	28	23	10
Chemistry	11,133	77	4	9	33	28	19	9
Community & Family Studies	8,029	73	4	4	25	33	24	11
Dance	922	81	5	14	42	29	11	3
Design & Technology	3,305	79	4	12	35	37	13	3
Drama	4,216	78	4	14	29	40	16	2
Earth & Environmental Science	1,574	76	4	5	33	33	20	8
Economics	5,190	78	4	13	33	26	20	6
Engineering Studies	1,996	76	4	9	27	35	20	7
English Standard	30,558	70	4	1	14	35	34	12
English Advanced	26,127	82	5	14	49	28	8	1
English Extension 1	4,064	43	E3			38	58	4
English Extension 2	1,525	38	E3			17	55	28
ESL	2,311	72	4	3	22	31	28	11
Food Technology	3,144	74	4	10	23	30	23	11
Geography	4,427	78	4	8	35	30	14	8
Industrial Technology	5,712	69	3	6	16	26	28	16
Information Processes & Technology	2,496	76	4	7	31	30	19	8
Legal Studies	10,309	78	4	12	32	28	13	10
Mathematics General 2	30,824	71	4	7	20	26	27	15
Mathematics	17,825	80	5	23	29	26	15	5
Mathematics Extension 1	9,021	41	E3			33	47	17
Mathematics Extension 2	3,164	85	E3			33	52	12
Modern History	11,089	77	4	11	32	29	14	9
History Extension	1,788	40	E3			24	55	20
Music 1	4,462	83	5	21	44	25	8	1
Music 2	735	88	5	42	50	8	<1	
Music Extension	451	47	E4			67	29	4
PDH&PE	15,986	73	4	7	27	28	25	10
Physics	9,454	75	4	10	24	31	22	10
Senior Science	6,536	73	4	4	18	40	26	7
Society & Culture	4,520	79	4	13	35	30	15	5
Software Design & Development	1,711	75	4	14	24	28	24	7
Studies of Religion I	8,299	38	4	9	28	34	23	6

Course	Number	Median HSC mark	Median Band	Percentage students in Performance Band				
				6	5	4	3	2
Studies of Religion II	6,192	77	4	7	35	30	20	7
Textiles & Design	1,454	78	4	14	32	29	19	5
Visual Arts	8,751	80	5	12	41	38	8	<1
Arabic Continuers	241	80	5	8	42	38	9	2
Arabic Extension	97	40	E3			21	57	23
Armenian	21	83	5	19	38	29	14	
Chinese Beginners	47	80	5	38	15	23	15	9
Chinese Continuers	173	89	5	45	42	11	2	
Chinese Extension	34	46	E4			71	29	
Chinese & Literature	622	83	5	13	58	26	3	<1
Chinese in Context	122	89	5	45	49	4	1	1
Classical Greek Continuers	18	92	6	61	28	6	6	
Classical Greek Extension	15	47	E4			87	13	
Classical Hebrew Continuers	17	93	6	71	12	12	6	
Classical Hebrew Extension	10	48	E4			90	10	
French Beginners	472	76	4	22	20	27	17	9
French Continuers	635	84	5	29	35	25	8	3
French Extension	151	43	E3			38	44	16
German Beginners	113	85	5	35	34	16	11	4
German Continuers	183	82	5	28	30	32	10	1
German Extension	41	42	E3			37	61	2
Hindi	24	88	5	38	46	13		4
Indonesian Beginners	44	81	5	30	23	23	11	14
Indonesian Continuers	62	85	5	35	34	21	8	2
Indonesian Extension	16	44	E3			44	50	6
Indonesian & Literature	41	74	4		10	68	22	
Italian Beginners	317	76	4	20	22	24	21	9
Italian Continuers	242	82	5	21	35	22	16	5
Italian Extension	61	44	E3			41	52	7
Japanese Beginners	718	78	4	14	31	27	14	10
Japanese Continuers	679	83	5	29	32	25	10	4
Japanese Extension	153	43	E3			42	49	9
Japanese in Context	30	86	5	30	53	10	7	
Khmer	18	84	5	6	67	28		
Korean Beginners	97	82	5	22	38	23	11	4
Korean Continuers	14	92	6	57	36	7		
Korean & Literature	40	84	5	33	33	23	10	3
Korean in Context	62	88	5	44	42	13	2	
Latin Continuers	156	90	6	50	37	11	2	1
Latin Extension	94	47	E4			85	14	1
Macedonian	18	79	4	11	39	22	11	17
Modern Greek Beginners	79	89	5	49	18	19	9	5
Modern Greek Continuers	100	86	5	31	39	25	5	
Modern Greek Extension	48	45	E4			50	48	2
Modern Hebrew	39	91	6	59	36	5		

Course	Number	Median HSC mark	Median Band	Percentage students in Performance Band				
				6	5	4	3	2
Persian	19	79	4	21	26	37	11	5
Polish	14	92	6	64	29	7		
Portuguese	13	79	4	31	15	38	15	
Punjabi Continuers	12	86	5	25	58	17		
Russian	17	91	6	65	29	6		
Serbian	24	87	5	33	54	8	4	
Spanish Beginners	204	78	4	16	29	31	14	8
Spanish Continuers	129	79	4	4	43	36	13	4
Spanish Extension	43	40	E3			26	63	12
Swedish	10	86	5	10	80	10		
Tamil	31	91	6	71	23	6		
Turkish	33	88	5	39	42	12	3	3
Vietnamese	141	83	5	4	67	26	2	1
Automotive Exam	193	69	3	5	12	32	36	13
Business Services Exam	1,056	76	4	5	30	37	17	8
Construction Exam	1,510	74	4	2	16	52	25	5
Electrotechnology Exam	220	70	4		11	40	37	12
Entertainment Industry Exam	813	77	4	6	33	36	15	9
Financial Services Exam	61	75	4		28	38	33	2
Hospitality Exam	4,715	74	4	3	26	37	20	14
Human Services Exam	667	69	3	1	10	38	42	9
Information & Digital Technology Exam	569	75	4	3	23	45	21	7
Metal & Engineering Exam	324	70	4	2	13	36	36	10
Primary Industries Exam	569	75	4	4	23	48	22	2
Retail Services Exam	811	71	4	<1	9	45	31	12
Tourism, Travel & Events Exam	224	75	4	<1	24	53	22	1

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 2018.

(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. 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	P_{99}	P_{90}	P_{75}	P_{50}	P_{25}
Aboriginal Studies	625	HSC	33.8	7.6	49.0	48.0	44.5	39.5	33.5	28.0
		scaled	13.9	12.4	44.3	43.5	35.0	21.5	9.4	3.7
Agriculture	1,396	HSC	35.9	7.0	49.5	47.5	44.0	41.0	37.0	31.5
		scaled	19.0	11.1	45.5	41.8	34.3	27.7	18.6	9.4
Ancient History	8,177	HSC	36.6	6.9	49.5	48.0	44.5	42.0	37.5	32.5
		scaled	23.3	11.1	49.7	45.8	38.4	31.7	23.2	14.7
Biology	18,105	HSC	37.2	6.1	48.5	46.5	44.5	41.5	38.0	34.0
		scaled	26.3	10.0	50.0	44.8	39.2	34.1	27.0	18.7
Business Studies	17,611	HSC	37.0	6.0	49.5	47.5	44.5	42.0	37.5	33.0
		scaled	24.0	10.8	49.5	44.7	38.5	32.6	24.2	15.4
Chemistry	11,133	HSC	37.6	6.0	49.0	47.0	44.5	42.0	38.5	33.5
		scaled	31.5	9.5	50.0	46.8	42.6	38.8	33.1	25.5
Community & Family Studies	8,029	HSC	36.2	5.7	49.0	46.5	43.0	40.5	36.5	32.5
		scaled	18.9	10.4	44.3	40.6	33.8	27.0	18.2	10.1
Dance	922	HSC	39.7	5.7	49.5	48.5	45.5	43.5	40.5	37.0
		scaled	22.9	12.1	48.3	46.1	39.4	33.0	22.4	13.7
Design & Technology	3,305	HSC	39.2	4.8	49.0	48.0	45.0	42.5	39.5	36.5
		scaled	22.2	10.4	47.6	44.4	36.5	30.0	21.8	14.0
Drama	4,216	HSC	39.1	4.7	49.5	48.5	45.5	42.5	39.0	36.0
		scaled	23.5	10.9	49.8	46.6	38.7	31.9	23.0	15.0
Earth & Environmental Science	1,574	HSC	37.4	5.6	48.5	46.5	44.0	41.5	38.0	34.0
		scaled	24.2	10.3	48.7	44.1	37.3	32.3	24.6	16.5
Economics	5,190	HSC	38.3	5.9	49.0	47.5	45.5	43.0	39.0	34.0
		scaled	31.7	9.7	50.0	47.3	43.0	39.3	33.3	25.3
Engineering Studies	1,996	HSC	37.5	5.7	49.0	47.5	44.5	41.5	38.0	34.0
		scaled	26.1	10.0	49.2	45.6	38.8	33.8	26.7	18.7
English Standard	30,558	HSC	34.6	5.2	48.5	44.5	41.0	38.0	35.0	31.5
		scaled	20.1	8.7	48.0	40.1	31.8	26.4	19.9	13.5
English Advanced	26,127	HSC	40.5	4.1	49.5	47.5	45.5	43.5	41.0	38.0
		scaled	31.6	8.3	50.0	46.0	41.5	37.8	32.6	26.3
English Extension 1	4,064	HSC	42.5	4.2	50.0	49.0	47.0	46.0	43.0	40.0
		scaled	35.8	6.6	50.0	47.2	43.5	40.6	36.7	31.8
English Extension 2	1,525	HSC	38.1	5.9	50.0	49.0	46.0	43.0	38.0	34.0
		scaled	35.3	7.1	50.0	48.7	44.7	40.7	35.6	30.3
ESL	2,311	HSC	35.5	6.1	49.0	46.0	42.5	40.0	36.0	32.0
		scaled	22.7	11.1	49.8	45.1	37.6	31.2	22.6	14.1
Food Technology	3,144	HSC	36.7	6.2	49.5	48.0	45.0	41.5	37.0	32.5
		scaled	19.2	11.3	46.2	42.9	36.1	27.9	17.5	9.9

Course	Number	Type of mark	Mean	SD	Max. mark	P_{99}	P_{90}	P_{75}	P_{50}	P_{25}
Geography	4,427	HSC	37.6	6.6	49.0	47.0	44.5	42.5	39.0	34.5
		scaled	25.0	11.2	50.0	46.0	39.2	33.7	26.0	17.0
Industrial Technology	5,712	HSC	34.3	7.1	49.5	47.5	43.0	39.0	34.5	30.0
		scaled	17.1	9.8	41.1	38.5	31.2	24.3	15.8	8.8
Information Processes & Technology	2,496	HSC	36.9	6.3	48.5	47.0	44.0	41.5	38.0	33.5
		scaled	22.1	11.0	48.4	44.7	36.6	30.6	22.5	13.5
Legal Studies	10,309	HSC	37.7	6.6	49.0	47.5	45.0	42.5	39.0	34.0
		scaled	25.0	11.1	50.0	45.2	39.7	34.0	25.7	16.4
Mathematics General 2	30,824	HSC	35.2	6.8	50.0	48.0	43.5	40.0	35.5	31.0
		scaled	21.5	10.7	46.0	43.0	36.7	30.1	20.9	12.9
Mathematics	17,825	HSC	39.3	6.4	50.0	49.0	46.5	44.5	40.0	35.5
		scaled	31.2	9.4	50.0	47.3	42.4	38.4	32.5	25.4
Mathematics Extension 1	9,021	HSC	40.0	7.4	50.0	49.5	48.0	46.0	41.0	36.0
		scaled	39.4	6.8	50.0	49.2	46.9	44.4	40.7	36.0
Mathematics Extension 2	3,164	HSC	40.9	6.2	50.0	48.5	47.0	45.5	42.5	38.0
		scaled	43.7	4.3	50.0	49.0	47.5	46.4	44.8	42.2
Modern History	11089	HSC	37.2	7.1	49.0	47.5	45.0	42.5	38.5	33.5
		scaled	25.5	11.3	50.0	46.1	39.8	34.4	26.8	17.1
History Extension	1,788	HSC	39.3	6.0	50.0	49.0	47.0	44.0	40.0	35.0
		scaled	33.6	6.7	49.1	47.0	42.0	38.5	33.8	29.3
Music 1	4,462	HSC	41.0	4.5	50.0	48.5	46.5	44.0	41.5	38.0
		scaled	21.3	10.6	46.8	43.3	36.1	29.4	20.8	12.8
Music 2	735	HSC	43.9	2.9	50.0	49.0	47.5	46.0	44.0	42.0
		scaled	33.7	8.0	50.0	47.5	43.6	40.0	34.7	27.7
Music Extension	451	HSC	45.2	5.0	50.0	50.0	50.0	49.0	47.0	43.0
		scaled	35.0	10.2	50.0	50.0	47.7	44.0	35.5	27.7
PDH&PE	15,986	HSC	36.4	6.1	49.0	47.0	44.0	41.0	36.5	32.5
		scaled	22.8	10.6	48.3	43.9	37.4	31.1	22.3	14.3
Physics	9,454	HSC	36.8	6.2	49.0	47.5	44.5	41.5	37.5	33.0
		scaled	30.5	9.6	50.0	46.8	42.2	38.1	32.0	23.9
Senior Science	6,536	HSC	35.6	6.0	49.0	46.5	42.5	39.5	36.5	33.0
		scaled	18.3	10.2	43.4	39.6	32.7	26.1	18.0	9.8
Society & Culture	4,520	HSC	38.7	5.8	50.0	48.0	45.5	43.0	39.5	35.5
		scaled	23.2	10.6	48.6	44.1	37.5	31.5	23.2	15.3
Software Design & Development	1,711	HSC	37.3	6.5	49.0	48.0	45.5	42.5	37.5	33.5
		scaled	24.6	10.7	48.9	45.0	38.9	33.1	24.5	16.5
Studies of Religion I	8,299	HSC	37.4	5.3	50.0	48.0	44.0	41.0	38.0	34.0
		scaled	28.1	8.6	48.3	44.3	39.3	34.6	28.5	22.1
Studies of Religion II	6,192	HSC	37.6	5.7	49.0	47.0	44.0	42.0	38.5	34.0
		scaled	27.4	9.9	50.0	45.3	39.8	35.0	28.3	20.5
Textiles & Design	1,454	HSC	38.7	5.4	49.5	48.0	45.5	43.0	39.0	35.0
		scaled	22.2	11.0	48.4	44.4	38.1	30.5	21.5	13.2
Visual Arts	8,751	HSC	40.1	3.9	50.0	47.5	45.0	43.0	40.0	37.5
		scaled	22.1	11.0	49.1	45.1	37.6	30.4	21.3	13.2

Course	Number	Type of mark	Mean	SD	Max. mark	P$_{99}$	P$_{90}$	P$_{75}$	P$_{50}$	P$_{25}$
Arabic Continuers	241	HSC	39.1	5.1	49.0	47.5	44.0	42.5	40.0	37.0
		scaled	15.4	11.1	42.7	41.6	31.2	23.4	13.5	6.0
Arabic Extension	97	HSC	39.6	5.0	48.0	48.0	46.0	44.0	40.0	35.0
		scaled	22.6	7.8	40.4	40.4	31.9	28.3	23.0	15.8
Armenian	21	HSC	40.6	4.6	48.0					
		scaled	25.2	11.5	50.0					
Chinese Beginners	47	HSC	40.3	6.4	49.5	49.5	49.0	46.5	40.0	35.0
		scaled	25.3	10.9	46.7	46.7	42.1	33.9	25.1	16.2
Chinese Continuers	173	HSC	43.7	3.2	49.0	48.5	47.5	46.0	44.5	42.0
		scaled	32.3	8.9	50.0	47.6	43.9	38.9	34.0	26.0
Chinese Extension	34	HSC	45.7	2.2	50.0					
		scaled	36.5	6.4	50.0					
Chinese & Literature	622	HSC	41.3	3.1	47.5	46.5	45.0	43.5	41.5	39.5
		scaled	23.5	10.2	48.5	46.1	38.1	30.6	23.5	16.1
Chinese in Context	122	HSC	44.1	3.2	49.0	48.5	47.5	46.5	44.5	42.5
		scaled	30.4	10.5	50.0	48.8	43.8	39.5	30.2	22.9
Classical Greek Continuers	18	HSC	44.5	3.7	48.5					
		scaled	38.8	9.2	50.0					
Classical Greek Extension	15	HSC	46.6	2.2	49.0					
		scaled	39.9	8.8	50.0					
Classical Hebrew Continuers	17	HSC	44.6	4.3	48.5					
		scaled	34.1	12.8	50.0					
Classical Hebrew Extension	10	HSC	46.7	2.4	49.0					
		scaled	37.4	9.5	50.0					
French Beginners	472	HSC	37.7	8.0	49.5	49.0	47.5	43.5	38.0	33.5
		scaled	24.0	11.3	49.1	48.0	40.4	31.9	23.2	15.6
French Continuers	635	HSC	41.0	5.2	49.5	48.5	47.0	45.0	42.0	38.0
		scaled	34.5	8.5	50.0	48.9	44.9	41.1	35.6	29.0
French Extension	151	HSC	40.7	6.3	49.0	48.0	47.0	46.0	43.0	37.0
		scaled	40.3	6.3	50.0	49.0	46.5	45.3	41.6	37.2
German Beginners	113	HSC	41.0	6.1	49.5	49.0	47.0	46.0	42.5	37.5
		scaled	25.4	10.1	47.8	46.8	37.8	34.3	25.8	17.9
German Continuers	183	HSC	40.9	4.8	49.0	49.0	47.0	45.5	41.0	38.0
		scaled	32.9	8.7	50.0	49.3	43.7	39.6	33.4	27.0
German Extension	41	HSC	42.9	4.1	49.0	49.0	48.0	46.0	42.0	41.0
		scaled	38.8	6.0	50.0	50.0	47.0	42.4	37.2	35.3
Hindi	24	HSC	42.9	4.5	47.5					
		scaled	27.8	10.0	46.8					
Indonesian Beginners	44	HSC	39.7	6.9	48.5	48.5	48.5	47.0	40.0	34.5
		scaled	26.5	13.2	50.0	50.0	47.0	38.4	25.5	15.6
Indonesian Continuers	62	HSC	41.9	4.9	49.5	49.5	47.5	45.5	42.5	39.0
		scaled	32.6	9.5	50.0	50.0	44.2	38.9	33.6	26.8
Indonesian Extension	16	HSC	42.2	5.6	49.0					
		scaled	35.8	9.2	50.0					

Course	Number	Type of mark	Mean	SD	Max. mark	P_{99}	P_{90}	P_{75}	P_{50}	P_{25}
Indonesian & Literature	41	HSC	37.0	2.5	41.5	41.5	39.5	39.0	37.0	35.5
		scaled	31.9	7.5	48.4	48.4	41.3	38.1	31.5	25.6
Italian Beginners	317	HSC	37.4	7.8	49.5	49.5	47.0	43.5	38.0	32.5
		scaled	26.0	12.2	50.0	49.3	42.6	35.2	26.1	16.7
Italian Continuers	242	HSC	39.7	5.5	48.5	48.0	46.0	44.0	41.0	36.0
		scaled	31.4	9.3	50.0	48.3	43.2	39.1	32.3	24.4
Italian Extension	61	HSC	42.8	4.1	49.0	49.0	47.0	46.0	44.0	40.0
		scaled	37.3	5.8	50.0	50.0	44.8	40.9	37.1	33.7
Japanese Beginners	718	HSC	37.7	7.0	49.5	48.0	45.5	43.0	39.0	34.0
		scaled	24.2	10.7	48.1	44.3	37.5	32.6	24.9	16.2
Japanese Continuers	679	HSC	40.8	5.5	50.0	49.5	47.5	45.5	41.5	37.5
		scaled	31.0	9.9	50.0	48.2	42.8	38.7	32.0	25.0
Japanese Extension	153	HSC	42.1	5.0	50.0	49.0	48.0	46.0	43.0	39.0
		scaled	38.2	5.1	50.0	47.7	44.2	42.5	38.3	35.2
Japanese in Context	30	HSC	42.4	3.5	48.0					
		scaled	25.4	9.9	47.0					
Khmer	18	HSC	41.4	2.0	45.0					
		scaled	17.7	10.5	41.8					
Korean Beginners	97	HSC	40.1	5.8	49.5	49.5	46.5	44.0	41.0	37.5
		scaled	26.6	10.2	47.1	47.1	39.3	33.6	27.1	21.3
Korean Continuers	14	HSC	45.4	3.6	49.5					
		scaled	27.1	10.0	45.3					
Korean & Literature	40	HSC	41.5	5.4	50.0	50.0	48.0	46.0	42.0	37.0
		scaled	21.9	11.4	48.0	48.0	38.6	28.8	19.5	12.1
Korean in Context	62	HSC	43.2	3.6	48.5	48.5	47.0	46.0	44.0	40.5
		scaled	28.1	10.1	49.8	49.8	41.5	35.9	29.3	19.8
Latin Continuers	156	HSC	43.8	3.8	49.5	49.0	47.5	47.0	44.5	41.5
		scaled	40.6	7.1	50.0	49.5	47.7	46.2	42.2	37.1
Latin Extension	94	HSC	46.5	3.0	50.0	50.0	49.0	48.0	47.0	46.0
		scaled	43.6	5.5	50.0	50.0	48.3	46.8	45.0	42.1
Macedonian	18	HSC	37.4	5.8	46.5					
		scaled	20.9	12.1	47.9					
Modern Greek Beginners	79	HSC	42.3	5.9	50.0	50.0	48.5	47.0	44.5	38.5
		scaled	25.4	11.9	50.0	50.0	40.5	34.4	27.1	15.3
Modern Greek Continuers	100	HSC	42.2	4.5	49.5	49.5	47.5	46.0	42.5	38.0
		scaled	26.9	11.7	50.0	48.9	42.3	36.2	26.5	15.6
Modern Greek Extension	48	HSC	43.5	4.6	50.0	50.0	49.0	47.0	44.0	40.0
		scaled	32.7	7.5	48.0	48.0	43.8	37.0	32.0	27.2
Modern Hebrew	39	HSC	45.1	3.0	49.0					
		scaled	35.1	5.5	45.0					
Persian	19	HSC	39.8	5.2	47.5					
		scaled	18.1	9.8	38.8					
Polish	14	HSC	45.5	3.1	49.5					
		scaled	31.9	10.7	50.0					

Course	Number	Type of mark	Mean	SD	Max. mark	P_{99}	P_{90}	P_{75}	P_{50}	P_{25}
Portuguese	13	HSC	40.9	4.9	48.0					
		scaled	19.3	11.7	42.6					
Punjabi Continuers	12	HSC	42.8	3.2	48.0					
		scaled	28.0	7.8	43.6					
Russian	17	HSC	44.9	2.8	48.0					
		scaled	28.2	9.7	45.5					
Serbian	24	HSC	43.0	3.5	49.0					
		scaled	20.8	11.0	47.1					
Spanish Beginners	204	HSC	38.5	6.2	49.0	48.5	45.5	43.0	39.0	35.0
		scaled	26.4	11.2	50.0	48.6	40.7	35.0	26.3	18.4
Spanish Continuers	129	HSC	38.8	4.4	47.0	47.0	44.0	42.0	39.5	36.5
		scaled	25.7	10.9	50.0	48.9	40.6	33.0	25.5	18.9
Spanish Extension	43	HSC	40.2	4.6	48.0	48.0	46.0	45.0	40.0	36.0
		scaled	31.2	6.9	46.1	46.1	39.2	37.7	30.3	25.7
Turkish	33	HSC	42.7	5.0	49.0					
		scaled	25.6	11.7	49.9					
Vietnamese	141	HSC	40.8	3.1	46.5	46.5	43.5	43.0	41.5	39.5
		scaled	22.8	10.7	48.2	48.2	35.3	30.7	24.4	14.3
Automotive Exam	193	HSC	35.2	5.3	48.5	47.5	43.0	38.0	34.5	32.0
		scaled	14.9	9.0	37.0	36.0	29.1	20.7	12.9	8.3
Business Services Exam	1,056	HSC	37.0	6.0	48.0	46.5	43.5	41.5	38.0	34.0
		scaled	19.0	10.4	44.4	41.7	34.2	27.2	18.6	10.4
Construction Exam	1,510	HSC	36.6	4.3	48.0	46.0	42.0	39.0	37.0	34.0
		scaled	15.0	9.7	38.9	37.3	29.4	21.8	13.8	6.8
Electrotechnology Exam	220	HSC	35.0	4.0	44.5	43.0	40.0	38.5	35.0	32.0
		scaled	17.5	8.5	38.1	36.0	29.2	24.9	16.6	10.4
Entertainment Industry Exam	813	HSC	37.6	5.3	48.0	46.0	44.0	41.5	38.5	34.5
		scaled	20.5	9.6	43.8	39.0	33.4	28.3	20.3	12.8
Financial Services Exam	61	HSC	36.8	3.9	44.0	44.0	42.0	40.0	37.5	34.0
		scaled	24.9	8.6	44.7	44.7	37.7	30.3	25.6	18.1
Hospitality Exam	4,715	HSC	36.4	5.3	47.5	46.0	43.0	40.5	37.0	32.5
		scaled	18.8	10.1	43.7	41.1	33.6	26.4	17.9	10.7
Human Services Exam	667	HSC	34.9	4.0	49.5	44.5	40.0	37.5	34.5	32.0
		scaled	18.8	9.5	42.1	39.7	33.1	26.2	17.4	10.9
Information & Digital Technology Exam	569	HSC	36.7	5.2	47.5	46.0	42.5	40.0	37.5	34.0
		scaled	18.3	10.1	42.7	40.2	32.9	25.8	17.7	9.9
Metal & Engineering Exam	324	HSC	34.6	5.4	46.5	45.0	41.0	38.0	35.0	32.0
		scaled	13.6	9.2	36.3	35.3	28.2	19.8	12.1	6.1
Primary Industries Exam	569	HSC	37.4	4.3	48.0	46.5	43.5	40.0	37.5	34.5
		scaled	16.9	9.4	39.9	38.3	31.5	23.6	15.2	9.1
Retail Services Exam	811	HSC	34.5	5.0	45.0	43.0	39.5	38.0	35.5	32.0
		scaled	16.4	10.7	42.7	40.7	30.3	24.9	15.2	7.5
Tourism, Travel & Events Exam	224	HSC	37.4	3.5	46.0	44.0	42.0	39.5	37.5	35.0
		scaled	20.7	8.9	42.0	38.8	33.4	26.3	19.9	13.7

Table A4 Distributions of HSC marks by course: 2017 and 2018

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	2018	625	90.1	76.2	56.0	35.0	8.2
	2017	575	86.8	73.4	53.6	27.7	9.6
Agriculture	2018	1,396	93.1	67.5	38.0	18.1	5.9
	2017	1,422	95.0	73.2	41.7	18.4	4.1
Ancient History	2018	8,177	90.4	63.5	36.7	15.1	4.5
	2017	8,834	91.1	63.5	38.1	18.4	6.7
Biology	2018	18,105	91.3	62.9	29.8	10.1	3.7
	2017	18,152	88.0	60.4	31.3	11.9	3.6
Business Studies	2018	17,611	91.5	62.6	34.9	12.4	2.2
	2017	17,469	91.7	63.3	34.4	12.7	4.5
Chemistry	2018	11,133	90.8	57.8	30.0	11.1	1.9
	2017	10,974	90.5	57.1	28.6	9.2	1.3
Community & Family Studies	2018	8,029	96.0	70.6	37.2	13.3	2.6
	2017	8,362	95.7	69.8	32.0	11.5	3.5
Dance	2018	922	86.2	44.6	16.1	4.9	1.7
	2017	925	87.2	46.3	18.3	3.0	1.4
Design & Technology	2018	3,305	88.2	53.2	16.4	3.3	0.6
	2017	3,158	88.7	56.6	22.6	5.1	0.8
Drama	2018	4,216	86.2	57.5	17.8	2.3	0.2
	2017	4,690	87.1	57.8	16.0	2.1	0.2
Earth & Environmental Science	2018	1,574	94.6	62.1	29.2	9.6	2.0
	2017	1,725	93.4	63.8	25.7	8.3	2.6
Economics	2018	5,190	86.8	53.4	27.6	7.6	1.5
	2017	5,261	85.5	50.8	25.9	7.6	2.9
Engineering Studies	2018	1,996	91.0	63.9	28.6	8.8	2.3
	2017	1,972	89.1	63.7	33.6	10.5	1.4
English Standard	2018	30,558	99.1	84.8	49.4	15.1	3.1
	2017	30,913	99.1	84.0	44.9	13.7	4.2
English Advanced	2018	26,127	86.2	37.3	9.5	1.4	0.2
	2017	26,779	84.8	36.3	8.2	1.4	0.4
English Extension 1	2018	4,064	62.1	21.6	4.3	0.7	0.2
	2017	4,333	70.0	26.3	6.5	1.6	0.7
English Extension 2	2018	1,525	83.3	59.9	28.6	6.3	1.0
	2017	1,672	79.4	51.9	22.4	3.9	0.4
ESL	2018	2,311	96.9	74.4	43.1	15.3	3.9
	2017	2,336	94.7	74.5	44.0	17.5	6.9
Food Technology	2018	3,144	89.8	67.1	37.2	13.8	2.6
	2017	3,305	91.5	69.7	40.1	18.2	3.8
Geography	2018	4,427	91.6	56.3	25.9	11.7	4.2
	2017	4,589	92.3	57.7	26.3	10.8	3.4

Course	Year	Number	Percentage of students with HSC mark less than:				
			45	40	35	30	25
Industrial Technology	2018	5,712	93.8	77.4	51.2	23.4	7.8
	2017	5,726	94.3	77.5	52.6	25.1	8.2
Information Processes & Technology	2018	2,496	93.1	62.5	32.0	12.7	4.2
	2017	2,684	92.5	69.7	34.2	18.3	5.4
Legal Studies	2018	10,309	87.7	55.5	27.0	14.2	3.9
	2017	10,797	86.9	55.8	24.9	8.3	3.3
Mathematics General 2	2018	30,824	93.4	73.1	46.9	20.1	5.4
	2017	31,543	93.1	74.2	49.3	25.4	8.4
Mathematics	2018	17,825	77.5	48.1	22.1	7.4	2.0
	2017	17,060	76.4	46.3	24.8	9.1	2.9
Mathematics Extension 1	2018	9,021	67.1	40.4	20.1	9.5	3.6
	2017	8,770	61.8	36.3	18.1	8.2	2.6
Mathematics Extension 2	2018	3,164	66.8	34.3	14.4	5.9	2.1
	2017	3,223	66.4	36.1	15.9	6.2	2.4
Modern History	2018	11,089	89.5	57.8	28.4	14.8	6.2
	2017	11,139	90.7	60.8	28.7	13.5	5.7
History Extension	2018	1,788	76.3	48.6	21.1	4.5	1.5
	2017	2,004	78.3	48.0	20.2	6.0	2.0
Music 1	2018	4,462	78.9	35.1	9.7	1.6	0.3
	2017	4,757	79.5	34.3	10.3	1.3	0.4
Music 2	2018	735	58.4	8.6	0.3	0.0	0.0
	2017	748	63.1	10.8	0.1	0.0	0.0
Music Extension	2018	451	33.0	13.3	4.0	0.9	0.2
	2017	409	36.7	18.8	5.1	1.5	0.0
PDH&PE	2018	15,986	93.2	66.5	38.8	13.6	3.5
	2017	15,679	91.1	69.1	40.2	18.7	6.5
Physics	2018	9,454	90.4	66.1	34.7	12.9	2.7
	2017	9,573	89.3	66.0	32.5	11.5	4.1
Senior Science	2018	6,536	96.0	78.2	37.9	11.8	4.8
	2017	7,061	93.8	75.4	39.8	13.1	5.5
Society & Culture	2018	4,520	87.3	52.6	22.3	6.9	1.9
	2017	4,537	87.1	52.4	20.5	6.6	1.8
Software Design & Development	2018	1,711	86.5	62.7	34.3	10.5	3.2
	2017	1,801	88.0	64.1	34.2	11.3	3.3
Studies of Religion I	2018	8,299	91.0	63.2	29.5	6.6	1.0
	2017	9,011	84.5	50.0	17.8	4.3	0.5
Studies of Religion II	2018	6,192	93.3	58.8	29.0	9.3	2.2
	2017	5,954	93.0	53.3	22.3	7.2	1.7
Textiles & Design	2018	1,454	85.6	53.5	24.2	5.2	0.6
	2017	1,471	86.2	49.4	22.6	6.7	1.6
Visual Arts	2018	8,751	87.6	46.6	8.2	0.6	0.1
	2017	9,071	87.3	45.3	9.7	1.1	0.1
Arabic Continuers	2018	241	92.1	49.8	11.6	2.9	1.2
	2017	265	90.2	41.9	9.1	2.6	0.4

Course	Year	Number	Percentage of students with HSC mark less than:				
			45	40	35	30	25
Arabic Extension	2018	97	79.4	48.5	22.7	1.0	0.0
	2017	109	79.8	54.1	23.9	2.8	0.0
Chinese Beginners	2018	47	61.7	46.8	23.4	8.5	0.0
	2017	63	61.9	49.2	31.7	15.9	1.6
Chinese Continuers	2018	173	54.9	12.7	1.7	0.0	0.0
	2017	128	54.7	20.3	10.9	0.8	0.0
Chinese & Literature	2018	622	87.3	28.9	3.1	0.3	0.0
	2017	721	84.5	32.9	4.2	0.6	0.1
Chinese in Context	2018	122	54.9	5.7	1.6	0.8	0.0
	2017	98	60.2	12.2	0.0	0.0	0.0
French Beginners	2018	472	78.4	58.3	31.1	14.0	5.1
	2017	538	77.7	55.6	27.5	13.6	4.3
French Continuers	2018	635	71.0	35.7	11.0	3.3	0.6
	2017	698	74.5	34.2	9.9	2.9	0.7
French Extension	2018	151	61.6	33.1	17.9	7.9	2.0
	2017	164	59.8	30.5	6.7	1.2	0.0
German Beginners	2018	113	65.5	31.9	15.9	5.3	0.9
	2017	112	57.1	25.9	11.6	0.9	0.0
German Continuers	2018	183	72.1	42.6	10.9	1.1	0.0
	2017	226	74.3	41.2	12.4	2.2	0.0
German Extension	2018	41	63.4	14.6	2.4	2.4	0.0
	2017	58	58.6	17.2	0.0	0.0	0.0
Indonesian Continuers	2018	62	64.5	30.6	9.7	1.6	0.0
	2017	74	73.0	36.5	10.8	2.7	1.4
Indonesian & Literature	2018	41	100.0	90.2	22.0	0.0	0.0
	2017	73	95.9	35.6	1.4	0.0	0.0
Italian Beginners	2018	317	80.4	58.7	35.0	13.9	5.4
	2017	339	83.8	64.6	34.8	15.0	5.3
Italian Continuers	2018	242	79.3	44.2	21.9	5.8	1.2
	2017	282	77.7	43.3	13.5	5.0	0.0
Italian Extension	2018	61	59.0	16.4	6.6	0.0	0.0
	2017	53	50.9	15.1	1.9	0.0	0.0
Japanese Beginners	2018	718	85.8	55.0	28.4	14.1	4.3
	2017	712	83.4	59.6	34.3	16.4	5.5
Japanese Continuers	2018	679	71.3	38.9	14.3	4.6	0.1
	2017	679	71.9	38.9	17.8	5.7	1.5
Japanese Extension	2018	153	58.2	29.4	9.2	1.3	0.0
	2017	162	63.0	30.2	9.9	1.2	0.6
Korean Beginners	2018	97	78.4	40.2	17.5	6.2	2.1
	2017	95	70.5	34.7	11.6	3.2	0.0
Korean in Context	2018	62	56.5	14.5	1.6	0.0	0.0
	2017	64	51.6	20.3	6.3	1.6	0.0
Latin Continuers	2018	156	50.0	13.5	2.6	0.6	0.0
	2017	159	47.8	18.2	5.0	1.3	0.6

Course	Year	Number	Percentage of students with HSC mark less than:				
			45	40	35	30	25
Latin Extension	2018	94	14.9	3.2	1.1	1.1	0.0
	2017	90	28.9	13.3	3.3	0.0	0.0
Modern Greek Beginners	2018	79	50.6	32.9	13.9	5.1	0.0
	2017	84	52.4	22.6	10.7	4.8	0.0
Modern Greek Continuers	2018	100	69.0	30.0	5.0	0.0	0.0
	2017	78	62.8	26.9	12.8	5.1	1.3
Spanish Beginners	2018	204	84.3	54.9	24.0	9.8	1.5
	2017	255	86.7	52.2	20.4	9.0	0.8
Spanish Continuers	2018	129	96.1	53.5	17.8	4.7	0.8
	2017	171	94.2	56.1	19.9	3.5	0.0
Spanish Extension	2018	43	74.4	46.5	11.6	0.0	0.0
	2017	53	81.1	47.2	22.6	3.8	1.9
Vietnamese	2018	141	96.5	29.8	3.5	1.4	0.0
	2017	145	88.3	33.8	6.2	1.4	0.0
Automotive Exam	2018	193	94.8	82.4	50.8	15.0	1.6
	2017	287	95.5	87.1	46.0	14.6	1.4
Business Services Exam	2018	1,056	94.8	64.9	27.8	10.8	2.9
	2017	1,102	93.5	61.3	23.9	9.9	2.2
Construction Exam	2018	1,510	97.7	81.5	30.0	5.5	0.3
	2017	1,616	97.8	81.3	36.9	9.0	0.5
Electrotechnology Exam	2018	220	100.0	88.6	49.1	11.8	0.0
	2017	223	99.1	86.5	49.3	7.6	1.3
Entertainment Industry Exam	2018	813	93.7	61.1	25.3	10.1	1.2
	2017	941	90.2	61.1	24.3	8.3	1.3
Financial Services Exam	2018	61	100.0	72.1	34.4	1.6	0.0
	2017	81	95.1	67.9	42.0	13.6	1.2
Hospitality Exam	2018	4,715	97.3	71.4	34.7	14.5	0.6
	2017	5,084	96.4	69.9	32.4	12.0	1.7
Human Services Exam	2018	667	99.1	89.5	51.1	9.1	0.4
	2017	674	97.9	79.2	32.3	6.1	0.1
Information & Digital Technology Exam	2018	569	97.0	74.2	29.5	8.6	2.1
	2017	716	97.5	76.1	29.5	7.7	1.3
Metal & Engineering Exam	2018	324	98.1	85.2	48.8	12.3	2.5
	2017	413	99.8	91.8	62.7	25.9	8.0
Primary Industries Exam	2018	569	96.5	73.1	25.1	3.0	0.7
	2017	662	95.6	69.5	29.5	7.7	0.8
Retail Services Exam	2018	811	99.9	91.2	46.0	14.9	2.6
	2017	860	99.8	90.6	42.7	12.6	1.7
Tourism, Travel & Events Exam	2018	224	99.6	75.9	23.2	1.3	0.0
	2017	274	99.6	77.4	19.0	4.0	0.0

Table A5 Distributions of scaled marks by course: 2017 and 2018

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	2018	625	100.0	95.4	89.9	85.3	79.5	71.7	63.5
	2017	575	100.0	96.3	89.9	85.0	81.4	75.1	65.4
Agriculture	2018	1,396	99.9	97.6	91.0	80.6	68.5	53.7	39.7
	2017	1,422	99.9	96.9	89.4	80.7	68.9	57.2	41.8
Ancient History	2018	8,177	98.6	92.7	82.7	70.4	55.3	40.3	25.8
	2017	8,834	98.7	93.0	82.2	68.2	52.8	37.7	24.4
Biology	2018	18,105	99.0	91.9	77.9	60.6	43.7	28.5	15.5
	2017	18,152	98.3	90.0	76.9	61.2	45.0	29.6	16.5
Business Studies	2018	17,611	99.2	93.1	81.6	67.5	52.4	37.4	24.0
	2017	17,469	99.2	92.9	81.6	66.9	51.9	37.3	23.5
Chemistry	2018	11,133	96.3	79.6	57.9	38.7	23.5	13.5	6.8
	2017	10,974	96.1	79.4	58.0	39.3	25.2	14.7	6.6
Community & Family Studies	2018	8,029	100.0	98.6	92.0	82.2	69.9	55.3	39.6
	2017	8,362	100.0	98.9	92.7	82.8	70.5	56.3	40.8
Dance	2018	922	97.1	90.9	80.0	68.4	57.5	43.8	29.2
	2017	925	98.6	93.0	80.3	68.1	56.5	41.1	27.7
Design & Technology	2018	3,305	99.1	94.9	86.9	75.0	60.8	44.7	28.0
	2017	3,158	99.0	94.6	87.3	74.9	60.6	44.2	30.6
Drama	2018	4,216	98.0	91.9	82.5	70.3	56.4	40.9	25.0
	2017	4,690	97.9	91.7	82.7	71.8	56.8	40.3	24.1
Earth & Environmental Science	2018	1,574	99.4	94.4	82.6	68.1	51.1	35.2	21.2
	2017	1,725	99.0	95.0	83.7	70.4	54.6	38.6	24.1
Economics	2018	5,190	95.5	78.5	56.4	38.6	24.3	13.1	6.6
	2017	5,261	96.1	78.3	54.0	35.1	21.9	12.8	6.8
Engineering Studies	2018	1,996	98.6	92.7	79.5	62.0	44.0	28.5	15.3
	2017	1,972	98.5	91.3	78.7	62.6	45.6	29.9	15.8
English Standard	2018	30,558	99.9	98.9	95.1	85.9	70.0	50.4	30.7
	2017	30,913	99.9	99.0	94.8	86.0	71.1	50.8	30.5
English Advanced	2018	26,127	98.0	84.2	61.2	38.6	21.3	9.8	3.9
	2017	26,779	97.4	83.3	61.6	39.7	22.1	10.5	4.1
English Extension 1	2018	4,064	95.2	71.8	39.6	18.5	6.0	2.0	0.6
	2017	4,333	95.5	71.4	38.6	17.1	5.7	2.1	0.9
English Extension 2	2018	1,525	91.2	72.4	48.0	23.7	7.5	2.2	0.5
	2017	1,672	90.7	71.0	45.5	24.0	7.1	1.3	0.4
ESL	2018	2,311	99.0	93.8	84.0	71.6	56.0	42.3	27.5
	2017	2,336	98.4	92.8	84.5	72.5	58.9	44.2	30.2
Food Technology	2018	3,144	99.8	96.0	88.5	78.7	68.9	56.6	42.9
	2017	3,305	99.9	96.6	87.5	76.8	63.9	51.7	37.2

Course	Year	Number	Percentage of students with scaled mark less than:						
			45	40	35	30	25	20	15
Geography	2018	4,427	98.6	91.7	79.2	63.4	47.1	32.7	21.0
	2017	4,589	98.3	91.2	78.0	62.1	46.9	32.9	20.5
Industrial Technology	2018	5,712	100.0	99.6	95.4	87.8	76.5	62.4	47.5
	2017	5,726	100.0	99.7	95.9	87.9	76.6	63.4	47.7
Information Processes & Technology	2018	2,496	99.2	95.1	86.4	73.4	58.5	42.9	28.0
	2017	2,684	99.4	95.1	87.6	75.7	61.3	44.4	29.6
Legal Studies	2018	10,309	98.8	90.9	78.1	63.3	48.3	34.2	22.0
	2017	10,797	98.4	90.0	77.0	61.8	46.0	31.5	19.2
Mathematics General 2	2018	30,824	99.8	95.5	86.6	75.0	61.8	47.2	31.8
	2017	31,543	99.9	96.4	87.4	74.8	60.9	45.8	30.3
Mathematics	2018	17,825	96.4	81.5	60.5	40.5	24.0	13.2	6.8
	2017	17,060	94.0	78.7	60.0	41.1	25.3	14.6	8.1
Mathematics Extension 1	2018	9,021	78.8	45.6	21.4	9.9	3.9	1.5	0.6
	2017	8,770	77.5	48.6	24.0	10.1	3.4	1.0	0.1
Mathematics Extension 2	2018	3,164	52.5	13.7	4.6	1.5	0.7	0.3	0.1
	2017	3,223	60.1	17.4	5.2	2.0	1.0	0.4	0.1
Modern History	2018	11,089	98.1	90.6	76.6	60.7	44.7	31.3	20.6
	2017	11,139	98.5	89.9	75.7	60.0	44.5	30.5	19.3
History Extension	2018	1,788	97.4	82.7	57.2	29.8	9.7	2.6	1.0
	2017	2,004	97.3	82.9	54.8	26.9	9.6	3.8	1.0
Music 1	2018	4,462	99.8	96.1	87.7	76.5	62.8	47.5	31.9
	2017	4,757	99.6	95.8	88.2	76.0	61.9	46.6	30.0
Music 2	2018	735	94.3	74.8	52.2	31.8	15.8	6.1	1.6
	2017	748	91.8	72.6	50.4	30.5	14.6	5.9	1.7
Music Extension	2018	451	79.2	64.1	47.9	32.4	18.6	8.4	3.1
	2017	409	79.7	65.3	44.7	29.3	16.9	6.4	1.7
PDH&PE	2018	15,986	99.4	94.5	84.6	72.0	57.9	43.1	27.0
	2017	15,679	99.8	95.2	84.8	71.2	57.1	42.5	27.5
Physics	2018	9,454	96.9	82.8	62.0	42.8	28.1	16.6	7.8
	2017	9,573	96.8	81.2	61.1	43.8	28.9	17.2	8.8
Senior Science	2018	6,536	100.0	99.3	93.9	84.9	72.1	57.1	40.4
	2017	7,061	100.0	99.2	93.6	84.1	72.4	57.0	40.5
Society & Culture	2018	4,520	99.2	94.1	85.2	71.0	55.5	39.4	24.0
	2017	4,537	98.9	93.7	84.0	70.6	55.4	38.7	24.0
Software Design & Development	2018	1,711	98.8	91.9	79.5	66.4	51.3	36.1	20.8
	2017	1,801	99.3	92.8	80.9	68.0	53.0	37.0	22.4
Studies of Religion I	2018	8,299	99.4	91.9	76.2	56.0	35.2	18.4	7.3
	2017	9,011	99.4	92.7	76.3	56.2	36.3	19.2	8.8
Studies of Religion II	2018	6,192	98.7	90.6	75.0	56.5	38.5	23.8	12.8
	2017	5,954	98.8	91.4	75.4	55.9	37.7	23.1	12.7
Textiles & Design	2018	1,454	99.1	93.2	84.7	73.7	60.2	46.0	30.5
	2017	1,471	98.2	91.8	83.5	72.6	57.8	42.6	29.7
Visual Arts	2018	8,751	98.9	93.8	85.1	73.8	60.3	45.8	30.2
	2017	9,071	99.0	94.1	85.5	73.7	60.5	45.9	31.5

Course	Year	Number	Percentage of students with scaled mark less than:						
			45	40	35	30	25	20	15
Arabic Continuers	2018	241	100.0	98.3	94.2	86.3	78.4	66.8	56.4
	2017	265	100.0	97.4	91.7	83.0	75.8	62.6	48.7
Arabic Extension	2018	97	100.0	99.0	91.8	83.5	59.8	38.1	19.6
	2017	109	100.0	100.0	95.4	76.1	59.6	33.0	13.8
Chinese Beginners	2018	47	95.7	89.4	78.7	61.7	48.9	29.8	21.3
	2017	63	92.1	87.3	74.6	66.7	55.6	46.0	33.3
Chinese Continuers	2018	173	93.6	77.5	57.8	36.4	23.1	12.1	1.7
	2017	128	93.8	76.6	55.5	32.8	18.8	11.7	7.0
Chinese & Literature	2018	622	98.2	93.6	85.5	73.6	55.9	38.7	21.9
	2017	721	98.2	92.8	84.7	73.0	60.1	45.6	27.2
Chinese in Context	2018	122	93.4	76.2	61.5	49.2	31.1	19.7	5.7
	2017	98	90.8	75.5	67.3	39.8	25.5	13.3	1.0
French Beginners	2018	472	97.0	89.6	81.4	69.1	54.7	37.9	22.5
	2017	538	97.8	90.3	79.7	66.9	49.8	34.9	21.6
French Continuers	2018	635	90.2	70.1	47.6	28.0	13.2	5.5	1.9
	2017	698	91.7	72.6	47.3	25.5	12.8	6.2	2.6
French Extension	2018	151	70.9	38.4	18.5	8.6	2.6	0.7	0.0
	2017	164	84.1	50.6	18.3	3.0	1.2	0.0	0.0
German Beginners	2018	113	98.2	93.8	78.8	62.8	46.9	31.9	15.9
	2017	112	96.4	91.1	78.6	50.0	39.3	25.9	15.2
German Continuers	2018	183	91.8	76.0	56.8	33.9	18.0	9.8	2.2
	2017	226	88.9	71.2	50.0	31.0	17.3	6.2	2.2
German Extension	2018	41	85.4	58.5	22.0	2.4	2.4	0.0	0.0
	2017	58	89.7	53.4	20.7	5.2	1.7	0.0	0.0
Indonesian Continuers	2018	62	91.9	77.4	54.8	38.7	22.6	14.5	1.6
	2017	74	94.6	83.8	70.3	45.9	28.4	14.9	5.4
Indonesian & Literature	2018	41	97.6	85.4	61.0	43.9	22.0	4.9	0.0
	2017	73	98.6	93.2	76.7	32.9	6.8	1.4	1.4
Italian Beginners	2018	317	92.7	84.9	74.8	59.3	46.1	34.1	21.5
	2017	339	97.3	89.4	80.2	66.7	54.3	35.4	20.9
Italian Continuers	2018	242	94.6	78.9	62.4	42.1	25.6	13.2	5.4
	2017	282	96.5	85.1	61.7	40.4	20.6	8.9	4.3
Italian Extension	2018	61	90.2	67.2	36.1	11.5	1.6	0.0	0.0
	2017	53	92.5	67.9	26.4	7.5	1.9	0.0	0.0
Japanese Beginners	2018	718	99.3	95.1	82.2	66.3	50.3	34.8	22.0
	2017	712	98.2	93.3	81.5	67.4	54.5	40.0	26.8
Japanese Continuers	2018	679	95.1	80.0	60.8	42.1	25.2	14.3	7.5
	2017	679	95.4	79.5	59.8	42.0	24.3	13.1	6.3
Japanese Extension	2018	153	90.8	62.1	24.2	5.2	1.3	0.0	0.0
	2017	162	91.4	67.9	29.6	4.9	1.2	0.0	0.0
Korean Beginners	2018	97	95.9	90.7	79.4	64.9	40.2	22.7	13.4
	2017	95	98.9	94.7	83.2	55.8	36.8	24.2	14.7
Korean in Context	2018	62	98.4	88.7	69.4	51.6	37.1	29.0	9.7
	2017	64	92.2	85.9	76.6	62.5	42.2	28.1	20.3

Course	Year	Number	Percentage of students with scaled mark less than:						
			45	40	35	30	25	20	15
Latin Continuers	2018	156	66.0	42.3	16.7	7.7	2.6	1.9	1.3
	2017	159	74.8	39.0	17.6	7.5	4.4	1.3	1.3
Latin Extension	2018	94	48.9	14.9	6.4	2.1	1.1	1.1	1.1
	2017	90	56.7	30.0	13.3	4.4	1.1	0.0	0.0
Modern Greek Beginners	2018	79	94.9	89.9	77.2	59.5	45.6	35.4	24.1
	2017	84	96.4	84.5	75.0	65.5	45.2	33.3	16.7
Modern Greek Continuers	2018	100	93.0	84.0	70.0	58.0	46.0	31.0	23.0
	2017	78	93.6	88.5	75.6	64.1	55.1	35.9	23.1
Spanish Beginners	2018	204	95.1	87.7	75.0	59.3	46.6	27.9	17.2
	2017	255	96.5	87.8	76.5	61.2	46.3	32.5	18.8
Spanish Continuers	2018	129	96.9	86.8	79.8	65.1	47.3	31.0	18.6
	2017	171	95.3	87.1	79.5	63.7	48.5	35.7	19.3
Spanish Extension	2018	43	95.3	90.7	67.4	46.5	20.9	2.3	0.0
	2017	53	96.2	79.2	66.0	32.1	20.8	7.5	1.9
Vietnamese	2018	141	97.9	96.5	87.9	70.9	51.8	39.0	27.0
	2017	145	98.6	93.8	84.8	76.6	60.0	43.4	28.3
Automotive Exam	2018	193	100.0	100.0	98.4	94.8	82.4	71.0	56.5
	2017	287	100.0	100.0	98.6	93.0	86.1	74.6	59.9
Business Services Exam	2018	1,056	100.0	97.8	91.1	82.6	72.1	55.0	38.3
	2017	1,102	100.0	98.6	93.5	85.2	69.8	58.3	41.0
Construction Exam	2018	1,510	100.0	100.0	97.7	90.5	81.5	70.8	54.8
	2017	1,616	100.0	100.0	97.3	90.7	79.6	68.4	52.8
Electrotechnology Exam	2018	220	100.0	100.0	98.2	93.2	77.3	63.6	42.3
	2017	223	100.0	100.0	96.4	91.0	78.9	63.2	46.2
Entertainment Industry Exam	2018	813	100.0	99.0	92.1	81.7	65.2	48.8	30.0
	2017	941	100.0	99.1	92.1	80.2	64.2	44.6	27.8
Financial Services Exam	2018	61	100.0	95.1	86.9	72.1	47.5	31.1	14.8
	2017	81	95.1	91.4	84.0	67.9	49.4	25.9	16.0
Hospitality Exam	2018	4,715	100.0	98.2	93.1	84.0	71.5	58.5	41.5
	2017	5,084	100.0	98.3	93.2	84.1	73.1	57.1	38.7
Human Services Exam	2018	667	100.0	99.1	94.8	84.4	71.5	57.9	40.8
	2017	674	100.0	99.3	93.9	86.1	74.9	55.2	39.0
Information & Digital Technology Exam	2018	569	100.0	98.9	93.7	85.6	74.2	56.9	39.4
	2017	716	100.0	99.4	95.7	87.6	76.1	58.2	41.9
Metal & Engineering Exam	2018	324	100.0	100.0	98.1	92.9	85.2	76.5	61.7
	2017	413	100.0	100.0	97.6	91.8	84.5	70.0	54.2
Primary Industries Exam	2018	569	100.0	100.0	97.0	88.8	78.0	63.1	47.5
	2017	662	100.0	100.0	96.4	92.1	79.9	66.9	52.7
Retail Services Exam	2018	811	100.0	98.6	93.3	87.7	79.3	64.4	47.7
	2017	860	100.0	98.4	94.7	86.5	78.1	64.8	48.8
Tourism, Travel & Events Exam	2018	224	100.0	99.6	92.4	82.6	64.7	52.2	28.6
	2017	274	100.0	96.7	91.2	79.9	62.8	44.2	26.3

Table A6   Courses that contribute to the ATAR (more than 10 units)

Notes: (i)   This table shows the percentage of the course candidature who completed more than 10 units of ATAR courses and 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 2018 or a previous year, and received an ATAR in 2018.

(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 the 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			Maximum ATAR including the course
		Number	Percentage	Percentage who counted course	
Aboriginal Studies	355	102	29	75	98.90
Agriculture	1,042	431	41	80	99.70
Ancient History	7,432	2,974	40	85	99.95
Biology	17,489	7,802	45	82	99.95
Business Studies	16,397	5,938	36	85	99.95
Chemistry	11,095	6,673	60	76	99.95
Community & Family Studies	6,621	2,017	30	89	99.65
Dance	811	261	32	61	99.35
Design & Technology	2,847	1,022	36	73	99.30
Drama	3,733	1,374	37	74	99.95
Earth & Environmental Science	1,444	551	38	84	99.90
Economics	5,145	2,781	54	77	99.95
Engineering Studies	1,941	1,033	53	72	99.90
English Standard	27,992	8,241	29	100	99.40
English Advanced	25,973	12,811	49	99	99.95
English Extension 1	4,061	2,744	68	86	99.95
English Extension 2	1,522	898	59	79	99.90
ESL	2,162	733	34	100	99.95
Food Technology	2,475	761	31	86	99.10
Geography	4,097	1,632	40	84	99.95
Industrial Technology	3,858	1,254	33	72	97.55
Information Processes & Technology	2,275	1,081	48	73	99.95
Legal Studies	9,815	3,931	40	85	99.95
Mathematics General 2	27,797	8,657	31	71	99.65
Mathematics	16,931	9,672	57	71	99.95
Mathematics Extension 1	8,987	6,474	72	89	99.95
Mathematics Extension 2	3,186	1,625	51	98	99.95
Modern History	10,300	4,414	43	85	99.95
History Extension	1,779	1,402	79	81	99.95
Music 1	3,733	1,371	37	65	99.65
Music 2	740	542	73	68	99.95

Course	Number receiving ATAR	ATAR students with > 10 units			Maximum ATAR including the course
		Number	Percentage	Percentage who counted course	
Music Extension	444	343	77	69	99.95
PDH&PE	14,467	4,982	34	85	99.95
Physics	9,425	5,333	57	74	99.95
Senior Science	5,175	1,682	33	83	98.15
Society & Culture	4,157	1,336	32	86	99.85
Software Design & Development	1,602	809	50	72	99.85
Studies of Religion I	8,130	7,062	87	81	99.85
Studies of Religion II	5,944	1,739	29	86	99.90
Textiles & Design	1,237	396	32	81	99.45
Visual Arts	7,424	2,541	34	73	99.80
Arabic Continuers	213	114	54	77	93.00
Arabic Extension	84	75	89	80	93.00
Armenian	31	20	65	45	90.80
Chinese Beginners	46	15	33	67	98.60
Chinese Continuers	165	112	68	58	99.90
Chinese Extension	34	30	88	77	99.90
Chinese & Literature	609	200	33	66	99.90
Chinese in Context	124	62	50	65	99.85
Classical Greek Continuers	18	16	89	69	99.90
Classical Greek Extension	15	13	87	69	99.95
Classical Hebrew Continuers	19	16	84	88	99.55
Classical Hebrew Extension	12	12	100	75	98.50
French Beginners	438	170	39	79	98.65
French Continuers	625	433	69	68	99.95
French Extension	149	127	85	84	99.95
German Beginners	104	36	35	64	97.95
German Continuers	189	115	61	71	99.95
German Extension	43	37	86	86	99.95
Hindi	25	20	80	55	99.30
Indonesian Beginners	41	22	54	64	99.40
Indonesian Continuers	61	35	57	71	99.70
Indonesian Extension	16	12	75	75	99.70
Indonesian & Literature	41	24	59	63	98.45
Italian Beginners	292	127	43	75	99.60
Italian Continuers	225	138	61	69	99.65
Italian Extension	59	44	75	80	99.65
Japanese Beginners	687	215	31	76	99.20
Japanese Continuers	658	375	57	62	99.95
Japanese Extension	154	115	75	80	99.80
Japanese in Context	30	12	40	67	92.30
Khmer	17	1	6	0	85.90
Korean Beginners	95	27	28	89	96.05
Korean Continuers	14	5	36	100	95.50

Course	Number receiving ATAR	ATAR students with > 10 units			Maximum ATAR including the course
		Number	Percentage	Percentage who counted course	
Korean & Literature	38	13	34	77	98.75
Korean in Context	61	23	38	78	99.05
Latin Continuers	155	133	86	61	99.95
Latin Extension	94	86	91	76	99.95
Macedonian	18	10	56	80	98.15
Modern Greek Beginners	73	29	40	86	98.00
Modern Greek Continuers	87	63	72	60	99.40
Modern Greek Extension	45	40	89	93	98.10
Modern Hebrew	46	24	52	79	99.55
Persian	20	7	35	57	87.95
Polish	15	10	67	80	96.80
Portuguese	11	6	55	50	78.10
Punjabi Continuers	12	9	75	67	94.70
Russian	21	7	33	57	90.75
Serbian	23	10	43	70	79.85
Spanish Beginners	188	79	42	66	99.85
Spanish Continuers	123	68	55	74	98.65
Spanish Extension	40	35	88	91	94.80
Tamil	26	25	96	64	99.00
Turkish	31	14	45	57	96.40
Vietnamese	134	45	34	76	98.60
Automotive Exam	122	52	43	58	87.60
Business Services Exam	879	333	38	74	97.25
Construction Exam	1,024	329	32	74	95.40
Electrotechnology Exam	156	62	40	61	87.50
Entertainment Industry Exam	706	236	33	81	97.70
Financial Services Exam	56	14	25	79	94.90
Hospitality Exam	4,207	1,347	32	76	98.75
Human Services Exam	590	242	41	78	96.85
Information & Digital Technology Exam	505	207	41	69	97.45
Metal & Engineering Exam	204	86	42	59	90.45
Primary Industries Exam	367	154	42	72	91.30
Retail Services Exam	651	271	42	70	94.75
Tourism, Travel & Events Exam	188	61	32	66	90.90

Table A7 ATAR distribution

Note: (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 2018 was 69.65.

ATAR	Number	Number on or above	Percentage on or above
99.95	46	46	0.1
99.90	46	92	0.2
99.85	48	140	0.2
99.80	46	186	0.3
99.75	45	231	0.4
99.70	47	278	0.5
99.65	50	328	0.6
99.60	46	374	0.7
99.55	42	416	0.7
99.50	49	465	0.8
99.45	48	513	0.9
99.40	49	562	1.0
99.35	47	609	1.1
99.30	43	652	1.2
99.25	50	702	1.3
99.20	44	746	1.3
99.15	47	793	1.4
99.10	44	837	1.5
99.05	48	885	1.6
99.00	49	934	1.7
99.00 - 99.95	934	934	1.7
98.00 - 98.95	940	1,874	3.3
97.00 - 97.95	934	2,808	5.0
96.00 - 96.95	941	3,749	6.7
95.00 - 95.95	934	4,683	8.3
94.00 - 94.95	938	5,621	10.0
93.00 - 93.95	940	6,561	11.7
92.00 - 92.95	940	7,501	13.4
91.00 - 91.95	935	8,436	15.0
90.00 - 90.95	935	9,371	16.7
89.00 - 89.95	945	10,316	18.4
88.00 - 88.95	919	11,235	20.0
87.00 - 87.95	939	12,174	21.7
86.00 - 86.95	935	13,109	23.4
85.00 - 85.95	944	14,053	25.0
84.00 - 84.95	927	14,980	26.7
83.00 - 83.95	931	15,911	28.3
82.00 - 82.95	930	16,841	30.0
81.00 - 81.95	912	17,753	31.6
80.00 - 80.95	928	18,681	33.3
79.00 - 79.95	923	19,604	34.9
78.00 - 78.95	918	20,522	36.6

ATAR	Number	Number on or above	Percentage on or above
77.00 - 77.95	913	21,435	38.2
76.00 - 76.95	930	22,365	39.8
75.00 - 75.95	898	23,263	41.4
74.00 - 74.95	900	24,163	43.1
73.00 - 73.95	901	25,064	44.7
72.00 - 72.95	910	25,974	46.3
71.00 - 71.95	893	26,867	47.9
70.00 - 70.95	894	27,761	49.5
69.00 - 69.95	875	28,636	51.0
68.00 - 68.95	876	29,512	52.6
67.00 - 67.95	867	30,379	54.1
66.00 - 66.95	884	31,263	55.7
65.00 - 65.95	847	32,110	57.2
64.00 - 64.95	860	32,970	58.7
63.00 - 63.95	841	33,811	60.2
62.00 - 62.95	833	34,644	61.7
61.00 - 61.95	833	35,477	63.2
60.00 - 60.95	807	36,284	64.6
59.00 - 59.95	828	37,112	66.1
58.00 - 58.95	794	37,906	67.5
57.00 - 57.95	784	38,690	68.9
56.00 - 56.95	783	39,473	70.3
55.00 - 55.95	770	40,243	71.7
54.00 - 54.95	739	40,982	73.0
53.00 - 53.95	758	41,740	74.4
52.00 - 52.95	737	42,477	75.7
51.00 - 51.95	708	43,185	76.9
50.00 - 50.95	708	43,893	78.2
49.00 - 49.95	688	44,581	79.4
48.00 - 48.95	672	45,253	80.6
47.00 - 47.95	665	45,918	81.8
46.00 - 46.95	639	46,557	82.9
45.00 - 45.95	632	47,189	84.1
44.00 - 44.95	604	47,793	85.2
43.00 - 43.95	590	48,383	86.2
42.00 - 42.95	560	48,943	87.2
41.00 - 41.95	554	49,497	88.2
40.00 - 40.95	538	50,035	89.1
39.00 - 39.95	509	50,544	90.1
38.00 - 38.95	487	51,031	90.9
37.00 - 37.95	458	51,489	91.7
36.00 - 36.95	447	51,936	92.5
35.00 - 35.95	421	52,357	93.3
34.00 - 34.95	396	52,753	94.0
33.00 - 33.95	366	53,119	94.6
32.00 - 32.95	342	53,461	95.3
31.00 - 31.95	320	53,781	95.8
30.00 - 30.95	288	54,069	96.3

Table A8   ATAR percentiles: 2014–2018

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

Percentile	ATAR 2014	ATAR 2015	ATAR 2016	ATAR 2017	ATAR 2018
100	99.95	99.95	99.95	99.95	99.95
99	99.35	99.40	99.40	99.35	99.40
98	98.75	98.75	98.75	98.75	98.80
95	96.95	96.95	96.95	96.90	97.00
90	93.95	93.95	93.95	93.85	94.00
85	90.90	90.90	90.90	90.80	91.00
80	87.85	87.85	87.85	87.75	88.00
75	84.80	84.75	84.75	84.70	85.00
70	81.70	81.65	81.60	81.60	82.00
60	75.40	75.25	75.25	75.40	75.85
50	68.95	68.70	68.65	69.00	69.65
40	62.15	61.70	61.65	62.40	63.15
30	54.70	54.05	53.95	55.35	56.20

Table A9   Relationship between the ATAR and aggregates: 2014–2018

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

ATAR	Lowest aggregate				
	2014	2015	2016	2017	2018
99.95	475.3	478.1	476.6	477.1	476.3
99.50	454.0	457.9	455.8	457.1	455.5
99.00	444.5	446.9	446.0	446.6	444.5
98.00	431.2	432.4	431.2	432.2	429.9
95.00	404.4	404.2	403.8	404.1	402.8
90.00	372.2	371.2	371.7	372.4	371.1
85.00	345.1	343.8	345.3	344.8	343.1
80.00	320.6	319.9	320.6	319.9	318.2
75.00	296.9	297.0	297.5	296.2	294.5
70.00	275.0	274.8	275.1	273.3	271.1
65.00	253.3	253.1	253.4	249.4	248.1
60.00	231.9	231.4	231.4	226.6	224.1
55.00	210.8	211.4	210.9	204.2	201.0
50.00	189.9	191.9	191.4	182.0	178.0

ABOUT THIS PUBLICATION

This report contains information on the calculation of the Australian Tertiary Admission Rank (ATAR) in 2018. It includes an overview of the HSC and the ATAR, a breakdown of the scaling process, analysis of HSC and ATAR statistics and notes trends for the year.

IMAGES

Kat Stanley Photography

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