

# Report on the Scaling of the 2015 

 NSW Higher School CertificateNSW Vice-Chancellors' Committee

- Technical Committee on Scaling


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## 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 Board of Studies, Teaching and Educational Standards (BOSTES) provides the HSC data from which the ATARs are calculated and the Universities Admissions Centre (UAC) advises individual students of their ATARs. Because of confidentiality provisions specified in Government legislation, ATARs cannot be provided to BOSTES, to schools or to other agencies.

This report contains information on the calculation of the ATAR in 2015.

Dr Rod Yager
Chair, Technical Committee on Scaling
Macquarie University
February 2016

## Acknow ledgements

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 Board of Studies, Teaching and Educational Standards NSW (BOSTES) 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 the Board 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 the Board of Studies, Teaching and Educational Standards NSW (BOSTES).

## Board Endorsed courses

Board Endorsed courses are courses whose syllabuses have been approved by the Board of Studies, Teaching and Educational Standards NSW (BOSTES) but which do not have formal examinations conducted by the Board.

## HSC cohort

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

## The Board

The Board refers to the Board of Studies, Teaching and Educatıonal Standards NSW (BOSTES).

## UAC

UAC refers to the Universities Admıssions Centre (NSW and ACT) Pty Ltd.

## VET examination courses

The VET Curriculum Frameworks are based on training packages where the assessment is competency based. As competencebased assessment does not yield a mark that can be used in the ATAR calculations, the Board of Studies, Teaching and Educational Standards NSW (BOSTES) introduced, for each VET Curriculum Framework, an additional course 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 the Board of Studies, Teaching and Educational Standards NSW (BOSTES). 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 in the Assessment, Certification and Examination Manual, and in the booklet Higher School Certificate Rules and Procedures, which are published annually by the Board, and are available on the Board's website at www.boardofstudies.nsw.edu.au.

### 1.2 Reporting student achievement in the HSC

For most ATAR courses, the Board 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, using performance bands, the standard achieved in the course 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 may also vary from year to year if student performance 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 trom the mark the student actually gained on the examination (the raw examination mark).
What the aligned mark indicates is the standard reached by a student and their position in the pertormance band. For example, a mark of 62 means that, while the student has pertormed 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 ditterent 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.
Although school assessments are moderated and then aligned against standards, a school's rank order of 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 the Board'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 the Board's processes can be found on the Board's website at www.boardofstudies.nsw.edu.au

## 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 Admissions 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, New South Wales used data from the School Certificate tests administered by the Board 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.
Since 2014 a two parameter logistic function has been used to translate the HSC students' positions based on their scaled aggregate marks into ATARs. This procedure is consistent with that used in other jurisdictions without Year 10 examinations.

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 ATAK Indicates the position of that student relative to their Year 7 cohort. Students who receive an ATAR of 80.00 in 2015, 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 2010 Year / students completed Year 12 and were eligible for an ATAR in 2015.
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 the Board 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 2015 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 2015

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 C alculation of the ATAR

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

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

Marks to be included in the AIAR caiculations 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 N otice

The ATAR Advice Notice includes:

- the student's ATAR

■ a list of the ATAR courses which the student studied and the categorisation of each course

- the number of units of each ATAR course that were actually included in the calculation of the ATAR.

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

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

An example of an ATAR Advice Notice is given below.

ABN 19070055935 ACN 070055935
Quad 2, 8 Parkview Drive, Sydney Olympic Park NSW post: Locked Bag I 12, Silverwater NSW 2128 tel: 1300 ASK UAC (1300 275 822); from mobile (02) 97520200 website: wnw.uac.edu.au

## 2015 Australian Tertiary Admission Rank Advice



Your Australian Tertiary Admission Rank (ATAR): 74.30 "SEVEN"FOUR"**THREE'ZERO
Shown below are the ATAR courses which were available for inclusion in your ATAR, together with the units that were actually included in the calculation. Information about ATAR eligibility and the calculation of the ATAR is shown over the page.

Your BOSTES Student Number: 12345678

| Course name | Category | Year <br> completed | Unit <br> value | Units included in <br> calculation of ATAR |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Business Studies | A | 2015 | 2 | 1 |
| English Standard | A | 2015 | 2 | 2 |
| Mathematics | A | 2015 | 2 | 2 |
| Studies of Religion 1 | A | 2015 | 1 | 0 |
| French Continuers | A | 2015 | 2 | 2 |
| French Extension | A | 2015 | 1 | 1 |
| Hospitality Examination | B | 2015 | 2 | 2 |

Issued by UAC without alteration or erasure (see reverse for details of security features)

> Dr David Christie
> Managing Director
> XX December 2015


The ATAR is a rank between 0.00 and 99.95 with increments of 0.05 . It is used by UAC participating institutions to rank and select school leavers for admission to most undergraduate courses. Some courses use selection criteria other than, or in addition to, the ATAR. For more information about the ATAR read pages 39-42 of the UAC Guide 2015-16 or pages 29-32 of the UAC International 2015-16 booklet or visit UAC's website at www.uac.edu.au/undergraduate/atar/ or www.uac.edu.au/international/atar/

The message 'Not eligible' appears on this advice if you did not satisfactorily complete the requirements for an ATAR as listed over the page.

If you are eligible to have a Limited ATAR calculated it will be sent to you on a separate advice. The Limited ATAR is calculated differently to the ATAR. The calculation of the Limited ATAR is described on page 42 of the UAC Guide 2015-16 or page 31 of the UAC International 2015-16 booklet or visit UAC's website at www.uac.edu.au/undergraduate/atar/ or www.uac.edu.au/international/atar/

## 3 C alculating the ATAR in 2015

### 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 2015 there were 27,356 different enrolment patterns for ATAR-eligible students; only 215 of these 27,356 combinations were completed by 20 or more students and 19,760 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 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 tor 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 and the number of students with each ATAR varies, depending in part on how many candidates tie on the same aggregate.

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 2015

The scaling procedure used to produce the aggregates in 2015 was unchanged from that used in 2014.

### 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
${ }^{1}$ These are school assessments that have been moderated using the raw examination marks.
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 the Board'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 the Board 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 the Board'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, the Board places the raw examination marks for the various streams in each framework on a common scale. Consequently Automotive Exam, Intormation and Digital Technology Exam and Hospitality Exam are each scaled as a single course.

### 3.2.4 Initial standardisation

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

### 3.2.5 Calculating scaled means and standard deviations

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

The scaled standard deviation for a 2 unit course is the standard deviation of the measure of overall academic achievement of the candidature of that course.
For Extension courses the scaled means and standard deviations are determined by the performance of the Extension students on the corresponding 2 unit courses. The exceptions are History Extension which can be completed by both Modern History and Ancient History students, and the second Extension courses in English and Mathematics: English Extension 2 and Mathematics Extension 2.
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 2015 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 2015 there were 4,452 distinct aggregates. There are a large number of tied results with some aggregates shared by more than 30 students.

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

Table 3.1 shows the ATAR-eligible percentiles corresponding to selected aggregates for the 2015 ATAR cohort. From the table it can be seen that, for example, 77.3 per cent of the 2015 ATAR cohort received an aggregate mark of 350 or less.

Table 3.1 ATAR-eligible percentiles corresponding to selected aggregates: 2015

| Aggregate | ATAR-eligible percentile |
| :---: | :---: |
| 450.0 | 98.6 |
| 400.0 | 90.8 |
| 350.0 | 77.3 |
| 300.0 | 60.7 |
| 250.0 | 43.6 |
| 200.0 | 27.6 |
| 150.0 | 14.2 |

### 3.2.9 Calculating the ATAR

In 2015 a two-parameter logistic function was used to translate the ATAR-eligible percentiles into ATARs. The logistic function approach was adopted in 1998 by other jurisdictions without Year 10 examinations. The procedure was based on the patterns observed in NSW data.

To illustrate the pattern, Figure 3.1 shows the proportion of the 2010 School Certificate cohort who were eligible for an ATAR two years later in 2012 plotted against the total School Certificate mark. Clearly almost all of the most able students stayed on to Year 12 and applied for an ATAR and the proportion of ATAR-eligible decreased as the School Certificate mark decreased. The larger spikes at the extreme School Certificate marks are due to the proportions being based on very small numbers of candidates. The shape of the plot in Figure 3.1 can be approximated by a two parameter logistic function.

Figure 3.1 Proportion of the School Certificate cohort who were eligible for an ATAR in 2012, by total School Certificate mark


The specific form of the logistic function will depend on the proportion of students in the target population who are ATAReligible. This proportion is called the participation rate. In 2015 the participation rate in NSW, determined using Australian Bureaus of Statistics data, was 60.1 per cent, up trom 59.6 per cent in 2014.
The anchor frequency is the number N , allocated to the 99.95 category. The top category should contain $1 / 2000$ th of the target population as all the most able candidates are assumed to complete Year 12 and apply for an ATAR. In 2015 this target frequency was $N=46$.
The logistic model is $\log \left[p_{1} /\left(1-p_{j}\right)\right]=a+b x_{j}$, where $N p_{j}$ is the target frequency of students at ATAR $x_{j}$, for $x_{i}$ less than 99.95. To be consistent with recent NSW ATAR patterns the minimum ATAR awarded was set at 7.00 . The target proportions were then rescaled to ensure the target proportions summed to 1 . The parameters in the logistic model were estimated using historical ATAR and participation rate data for NSW for 2006-2014.
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 3.2

Figure 3.2 Percentage of ATAR-eligible students in each ATAR truncated category in 2015


- allocated - target

The relationship between the ATAR and ATAR-eligible percentile in 2015 is shown in Figure 3.3.
Figure 3.3 Relationship between ATAR and ATAR-eligible percentile in 2015


The relationship between aggregates and ATARs in 2015 is shown graphically in Figure 3.4.
Figure 3.4 Relationship between aggregate and ATAR in 2015


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 2015 data.

Table 3.2 Relationship between aggregate and ATAR

| Aggregate | ATAR |
| :---: | :---: |
| 450.0 | 99.15 |
| 400.0 | 94.40 |
| 350.0 | 86.20 |
| 300.0 | 75.70 |
| 250.0 | 64.25 |
| 200.0 | 52.00 |
| 150.0 | 38.65 |

## 4 The HSC and ATAR in 2015-some results

### 4.1 O verview

In 2015 there were no new courses. The only notable change was that the examinations for the Automotive, Information and Digital Technology and Hospitality VET Frameworks were each split into two or more streams so that the examinations for these VET Frameworks could be administered more efficiently. However, this change had no impact on the computation of ATARs as in each case, the raw marks for the various streams were placed on a common scale by the Board, and so the examination for each framework was scaled as a single course.

A total of 76,011 students completed at least one HSC course in 2015, but 3,773 were removed from the database as they completed no ATAR course. Of the remaining pool of 72,238 students 90.4 per cent received an HSC and 77.2 per cent received an ATAR. Only 9 students who received an ATAR were not eligible for the HSC. While courses contributing to the underlying aggregate may be accumulated over a five year period, 94.2 per cent of those receiving an ATAR in 2015 included only 2015 courses in their aggregate.

The percentage of students enrolled in at least one ATAR course who were female ( 51.4 per cent) was lower than the previous year, as was the percentage of students who received an ATAR who were female ( 53.0 per cent).

### 4.2 Percentage of students receiving an ATAR

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

1. 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.
2. Those who enrol in a full HSC program which does not satisty the requirements for an ATAR. These students normally complete six or eight units of Board Developed courses, and choose the remainıng units from Board Endorsed courses. They receive an HSC but not an ATAR. In 2015 there were 9,552 such students.

Table 4.1 Proportion of students receiving an ATAR: 2011-2015

| Year | HSC candidature | Students receiving an ATAR |  |
| :---: | :---: | :---: | :---: |
|  |  | Number | $\%$ |
| 2011 | 69,309 | 54,897 | 79.2 |
| 2012 | 69,638 | 54,847 | 78.8 |
| 2013 | 70,686 | 54,642 | 77.3 |
| 2014 | 71,706 | 55,482 | 77.4 |
| 2015 | 72,238 | 55,736 | 77.2 |

### 4.3 N umber of units of ATAR courses completed

The pattern in 2015 was similar to that observed in 2014, with 45.6 per cent completing exactly 10 ATAR units and 31.7 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: 2012-2015

| Number of units | $\begin{gathered} 2012 \\ \% \end{gathered}$ | $\begin{gathered} 2013 \\ \% \end{gathered}$ | $\begin{gathered} 2014 \\ \% \end{gathered}$ | 2015 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | \% | Number |
| 1 | 0.2 | 0.4 | 0.4 | 0.5 | 384 |
| 2 | 5.7 | 6.6 | 7.0 | 7.6 | 5,471 |
| 3 | 0.4 | 0.4 | 0.5 | 0.5 | 385 |
| 4 | 4.3 | 4.6 | 5.0 | 5.3 | 3,815 |
| 5 | 0.1 | 0.1 | 0.2 | 0.1 | 78 |
| 6 | 5.1 | 5.5 | 5.3 | 5.1 | 3,698 |
| 7 | 0.2 | 0.2 | 0.2 | 0.2 | 111 |
| 8 | 4.5 | 4.2 | 3.5 | 3.2 | 2,278 |
| 9 | 0.3 | 0.2 | 0.2 | 0.2 | 111 |
| 10 | 45.1 | 44.2 | 44.6 | 45.6 | 32,952 |
| 11 | 18.2 | 17.9 | 17.9 | 17.2 | 12,458 |
| 12 | 13.9 | 13.7 | 13.3 | 12.8 | 9,266 |
| 13 | 1.6 | 1.5 | 1.5 | 1.3 | 951 |
| 14 | 0.3 | 0.3 | 0.3 | 0.3 | 231 |
| 15+ | 0.1 | 0.1 | 0.1 | 0.1 | 49 |
| HSC candidature | 69,638 | 70,686 | 71,706 |  | 72,238 |

${ }^{1}$ The units include current year units and units accumulated in previous years.

### 4.4 Course enrolments - Table A1

Table A1 in the Appendix provides, tor each course, the size of the candidature, the number who received an HSC award in 2015, the number who received an ATAR in 2015, 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 2015 as well as those who completed the course in previous years and completed at least one ATAR course in 2015. 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 20,310 students enrolled in at least one VET course, of which 13,784 students enrolled in a VET examination course. The proportion taking a VET examination course in 2015 ( 67.9 per cent) is lower than 2014 ( 69.5 per cent).
Overall, 77.2 per cent of the 2015 HSC cohort received ATARs but the percentage varied across courses, from 48.8 per cent to 100 per cent for Category A courses with candidatures exceeding 100. For students enrolled in any VET courses the overall figure was 51.9 per cent but was higher, 75.5 per cent, for students enrolled in VET examination courses.

### 4.5 Distributions of HSC marks - Table A2

Table A2 in the Appendix shows the distributions of HSC marks in 2015. 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 2014 shows that distribution of HSC marks has changed for some courses. (See Section 5.1.)

### 4.6 Descriptive statistics of HSC and scaled marks - Table A3

Table A3 in the Appendix presents, for each course, descriptive statistics and the 99th, 90 th, 75 th, 50 th and 25 th percentiles for HSC and scaled marks. Data are not provided for courses with less than 10 students. Percentiles are not included for courses with less than 40 students.
Although HSC marks are not used as the basis for scaling they are shown in Table A3 because raw marks are not released to students or teachers and hence cannot be presented in this report. Scaled marks are generally lower than HSC marks: few students receive HSC marks less than 25 (on a one-unit basis) whereas the average scaled mark for the total HSC candidature is approximately 25 .

In the table, marks are shown on a one-unit basis, so the range is 0 to 50 . The percentiles in a course are based on all students completing that course in 2015 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.
The Board reports HSC marks rounded to the nearest integer whereas raw marks are calculated to one decimal place. The Board 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 pertormances in an Extension course (except for Mathematics Extension 2) are allocated one of the six integer grades 45.0 to 50.0 . Thus atter 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 yuth percentile was 46.0. Students with a History Extension HSC mark of 46.0 in fact corresponded to the scaled mark percentile range 82.3 to 91.4 .

The scaled marks reported in Table A3 are the scaled marks at the specitied percentiles. The 90th percentile of the scaled mark distribution in History Extension was 42.3 but there was a range of scaled marks achieved by those with an HSC mark of 46.0 .

Looking at English Extension 2 in Table A3 we see that the maximum mark and the 99th percentile of the HSC distribution are both 50.0 whereas the scaled marks at the corresponding percentiles are 50.0 and 48.8. 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 French Continuers, Design and Technology and Information Processes and Technology.

Table 4.3 Scaled marks for selected percentiles

| Course | Scaled |  |  |
| :--- | :---: | :---: | :---: |
|  |  | Scaled mark for |  |  |
|  | 35.1 | $P_{90}$ | $P_{50}$ |
| French Continuers | 21.5 | 45.2 | 36.3 |
| Design and Technology | 21.5 | 36.3 | 20.7 |
| Information Processes and <br> Technology |  | 26.2 | 21.2 |

Design and Technology and Information Processes and Technology have the same scaled mean and almost the same scaled mark corresponding to the 90 th percentile. French Continuers has a higher scaled mean and higher scaled marks at corresponding percentiles. The table shows that the students who are at the 90 th percentile of the Design and Technology and Information Processes and Technology candidatures have the same scaled marks for those courses as the middle candidate in French Continuers.

### 4.7 Distribution of ATA Rs - Table A 7

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 2015 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 2010 Year 7 cohort if all those students continued to Year 12 and had been eligible for an ATAR in 2015. From Table 4.4 we see that in 2015, 16.5 per cent of the ATAR-eligible students received an ATAR of 90.00 or above and 32.7 per cent gained an ATAR of 80.00 and above.

Table 4.4 Percentage of ATAR students receiving specific ATARs and above: 2011-2015

| ATAR | 2011 <br> $\%$ | 2012 <br> $\%$ | 2013 <br> $\%$ | 2014 <br> $\%$ | 2015 <br> $\%$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 99.00 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 |
| 95.00 | 8.5 | 8.5 | 8.4 | 8.3 | 8.3 |
| 90.00 | 16.8 | 17.0 | 16.7 | 16.5 | 16.5 |
| 80.00 | 33.3 | 33.5 | 33.1 | 32.8 | 32.7 |
| 70.00 | 48.9 | 49.3 | 48.9 | 48.4 | 48.1 |
| 60.00 | 63.2 | 63.8 | 63.3 | 63.0 | 62.4 |
| 50.00 | 75.5 | 76.3 | 75.9 | 75.8 | 74.8 |

Table 4.5 Median ATAR: 2011-2015

| Year | Median ATAR <br> all students | Median ATAR <br> temale | Median ATAR <br> male |
| :---: | :---: | :---: | :---: |
| 2011 | 69.25 | 71.10 | 67.00 |
| 2012 | 69.55 | 11.35 | 67.55 |
| 2013 | 69.20 | 71.00 | 67.00 |
| 2014 | 68.95 | 70.30 | 67.20 |
| 2015 | 68.70 | 70.75 | 66.35 |

Table 4.5 shows the median ATAR and the median ATAR for male and female candidates for the years 2011-2015.
In 2015, 46 students received the top ATAR of 99.95 , 25 males and 21 females, from a mix of government and independent schools.

### 4.8 ATAR percentiles and relationship between ATAR and aggregates - Tables A 8,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 2015 received an ATAR of 93.95 or above.

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

### 4.9 Gender differences

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

Table 4.6 Percentage of students receiving ATARs on or above specified values who were female: 2011-2015

| ATAR | 2011 <br> $\%$ female | 2012 <br> $\%$ female | 2013 <br> $\%$ female | 2014 <br> $\%$ female | 2015 <br> $\%$ female |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 99.00 | 47.1 | 50.1 | 50.3 | 46.5 | 50.2 |
| 98.00 | 50.9 | 52.8 | 52.0 | 48.3 | 52.1 |
| 95.00 | 53.4 | 54.9 | 54.0 | 51.3 | 54.1 |
| 90.00 | 55.9 | 55.7 | 55.8 | 53.8 | 56.2 |
| 80.00 | 56.7 | 56.3 | 56.9 | 55.2 | 57.1 |
| 70.00 | 56.4 | 55.9 | 56.6 | 55.4 | 56.4 |
| 60.00 | 55.9 | 55.2 | 56.0 | 55.2 | 55.5 |
| 50.00 | 55.3 | 54.0 | 55.2 | 54.7 | 54.9 |
| 40.00 | 54.7 | 53.6 | 54.1 | 54.2 | 54.3 |
| 30.00 | 53.4 | 53.0 | 53.7 | 53.8 |  |
| Total cohort |  |  | 53.1 | 53.0 |  |

Figure 4.1 shows the percentage of students on each ATAR who were female. For this graph the ATARs have been truncated, so that an ATAR of 90 , for example, includes ATARs trom 90.00 to 90.95 . Uverall 53.0 per cent of the ATAR cohort was female, which is represented by the horizontal line on the graph. The graph shows clearly that there were proportionally more females on ATARs above 70.00 than males.

Figure 4.1 Percentage ot students on each ATAR who were female


The vast majority of students who completed the 2015 NSW Higher School Certificate were in year 7 in 2010. The following table reveals that there are substantial gender differences in the proportions of students from the 2010 NSW Year 7 school cohort who subsequently went on to receive an HSC award or ATAR in 2015.
Comparisons with the equivalent figures for the 2011 HSC shows that gender difference in the proportion of the corresponding Year 7 cohort becoming eligible for an ATAR increased by 1 per cent over the four year period.

Table 4.7 Percentage of male and female in Year 7 in 2010 receiving an HSC award or eligible for an ATAR in 2015

|  | Number <br> female | \% of 2010 <br> female Year 7 cohort | Number <br> male | \% of 2010 <br> male Year 7 cohort |
| :--- | :---: | :---: | :---: | :---: |
| Year 7, 2010* | 42,424 |  | 43,908 |  |
| Eligible for HSC award 2015 | 33,921 | 80.0 | 31,358 | 71.4 |
| Eligible for ATAR 2015 | 29,554 | 69.7 | 26,182 | 59.6 |

*Australian Bureau of Statistics data: Schools, Australia 2015

### 4.10 U niversity offers

UAC makes several rounds of 'offers' from September to the end of February. In this report 'offer' refers to offers made in any of those rounds. It does not include offers made by UAC in courses that are not bachelor degrees, or do not start in traditional semester 1 , or are domestic fee-paying courses.

Of the 55,736 students who received an ATAR in 2015, 81.3 per cent applied through UAC for a university course. Of the domestic (local) applicants 81.4 per cent were made at least one offer of a place. Tables 4.8 and 4.9 provide a breakdown of applicants and offers by ATAR band.

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

| ATAR band | Total number <br> of students | Applicants |  |
| :---: | :---: | :---: | :---: |
|  |  | Percentage $^{1}$ |  |
| $90.00-99.95$ | 9,208 | 9,101 | 98.8 |
| $80.00-89.95$ | 8,993 | 8,685 | 96.6 |
| $70.00-79.95$ | 8,605 | 8,000 | 93.0 |
| $60.00-69.95$ | 7,948 | 6,884 | 86.6 |
| $50.00-59.95$ | 6,924 | 5,310 | 76.7 |
| Below 50.00 | 14,058 | 7,314 | 52.0 |
| Total | 55,736 | 45,294 | 81.3 |

${ }^{1}$ I hese are percentages of the total number of students in the given ATAR band.
Not all the applicants have been made an offer solely on the basis of their ATARs. For some programs alternative criteria have been used, while for other programs students' ATARs have been supplemented by additional criteria.

Table 4.9 Offers of university places by ATAR - domestic only

| ATAR band | Number of <br> applicants | Offers |  |
| :---: | :---: | :---: | :---: |
|  |  | Percentage $^{2}$ |  |
| $90.00-99.95$ | 8,932 | 8,891 | 99.5 |
| $80.00-89.95$ | 8,515 | 8,386 | 98.5 |
| $70.00-79.95$ | 7,881 | 7,574 | 96.1 |
| $60.00-69.95$ | 6,751 | 6,122 | 90.7 |
| $50.00-59.95$ | 5,204 | 3,705 | 71.2 |
| Below 50.00 | 7,057 | 1,404 | 19.9 |
| Total | 44,340 | 36,082 | 81.4 |

[^0]
## 5 Trends and other issues

### 5.1 Variation in patterns of HSC marks - Tables A 4,A5

As noted in Chapter 3 the scaling process uses the raw marks not the HSC marks that the Board 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 the Board 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 2015 and 2014. 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 2015 and 2014. 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.
Community and Family Studies is an example of a course where the candidature was almost the same as in 2014 but there is a change in the distribution of HSC marks (Table 5.1). The distributions of scaled marks in the two years were, however, similar.

Table 5.1 Distributions of HSC and scaled marks for Community and Family Studies: 2015 and 2014, on a one-unit basis

| Mark | Year | Enrolment | Percentage of students with mark less than: |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 45 | 40 | 35 | 30 | 25 |
| HSC mark | 2015 |  | 94.2 | 67.6 | 34.3 | 13.4 | 3.1 |
| Scaled mark | 2014 | 7,687 | 94.3 | 62.9 | 28.9 | 8.5 | 1.8 |
|  | 2015 | 7,957 | 100.0 | 98.8 | 92.1 | 82.0 | 69.1 |
|  | 2014 | 7,687 | 100.0 | 98.9 | 92.4 | 82.0 | 69.4 |

Taken together, the data Indicate that the 2015 candidature in Community and Family Studies performed worse than the corresponding cohort in 2014 in terms of the performance standards for Community and Family Studies. However, their overall performance as judged by their scaled marks is very similar.

### 5.2 Distributions of English and Mathematics marks: 2012-2015

Because all students study English, and most study Mathematics, comparative data is shown for English and Mathematics courses for the four years, 2012 to 2015. Table 5.4 shows the distributions of HSC marks and Table 5.5 shows the distributions of scaled marks.
There is a continuing decline in the number of students completing English Extension 1 and English Extension 2 that has persisted over the past 5 years. By comparison the number of students completing the non-ATAR course English Studies is growing. In 2015 there were 6,403 candidates who completed English Studies. These students were not ATAR eligible.
In 2015, 16.2 per cent of ATAR eligible students did not complete a mathematics course and 23.5 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.

■ The Board 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.

■ The Board 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 raw HSC mark yields the same scaled mark for Standard and Advanced students.

- The Board aligns the raw examination marks against standards separately tor Standard and Advanced students. As a result, Advanced students on a given raw mark may receive a different aligned mark than Standard students on the same raw mark. Consequently an aligned HSC mark may correspond to a slightly ditterent range ot scaled marks 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 in Mathematics is presented below. Table 5.2 shows the information broken down as per the information supplied for other subjects in Iable A2.Tabie b.3 shows the information broken down as per the information supplied for other subjects in Table A3.

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

| Course | Number | Median HSC mark | Median band | Percentage of students in Performance Band |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 6 | 5 | 4 | 3 | 2 |
| Mathematics - 2 unit students only | 10,901 | 77 | 4 | 9 | 28 | 36 | 14 | 9 |

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

| Course | Number | Type of mark | Mean | SD | Max. mark | P99 | P90 | P75 | P50 | P25 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mathematics - 2 unit students only | 10,901 | HSC | 37.1 | 6.9 | 50.0 | 48.5 | 44.5 | 41.5 | 38.5 | 34.0 |
|  |  | scaled | 28.0 | 9.8 | 50.0 | 46.8 | 39.4 | 34.9 | 29.3 | 22.5 |

Table 5.4 Distributions of HSC marks for English and M athematics courses: 2012-2015

|  | Year | Enrolment | Percentage of students with HSC mark less than: |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 45 | 40 | 35 | 30 | 25 |
| English Standard | 2015 | 31,501 | 99.6 | 91.6 | 57.6 | 15.3 | 3.3 |
|  | 2014 | 31,483 | 99.7 | 91.8 | 56.5 | 14.3 | 2.8 |
|  | 2013 | 31,495 | 99.6 | 93.1 | 65.8 | 21.0 | 4.5 |
|  | 2012 | 31,803 | 99.5 | 84.2 | 48.3 | 21.5 | 3.1 |
| English Advanced | 2015 | 26,002 | 84.6 | 42.1 | 8.8 | 0.9 | 0.2 |
|  | 2014 | 26,729 | 85.3 | 40.6 | 8.4 | 0.8 | 0.2 |
|  | 2013 | 27,007 | 88.0 | 46.9 | 13.9 | 1.5 | 0.2 |
|  | 2012 | 27,217 | 87.4 | 45.9 | 11.2 | 0.9 | 0.1 |
| English Extension 1 | 2015 | 4,512 | 65.4 | 22.5 | 5.7 | 0.9 | 0.2 |
|  | 2014 | 4,848 | 69.4 | 29.3 | 6.8 | 1.1 | 0.3 |
|  | 2013 | 5,007 | 75.3 | 34.6 | 11.5 | 3.2 | 0.8 |
|  | 2012 | 5,265 | 75.0 | 35.4 | 12.7 | 3.2 | 0.8 |
| English Extension 2 | 2015 | 1,631 | 73.8 | 42.8 | 17.5 | 4.0 | 0.3 |
|  | 2014 | 1,776 | 76.8 | 49.2 | 22.5 | 6.8 | 1.7 |
|  | 2013 | 1,907 | 77.3 | 47.7 | 22.0 | 7.4 | 2.4 |
|  | 2012 | 2,126 | 78.1 | 50.0 | 21.4 | 6.9 | 1.7 |
| ESL | 2015 | 2,368 | 96.0 | 73.7 | 38.8 | 16.5 | 4.1 |
|  | 2014 | 2,291 | 95.5 | 71.4 | 33.8 | 10.4 | 2.1 |
|  | 2013 | 2,410 | 97.4 | 76.6 | 40.2 | 15.7 | 4.1 |
|  | 2012 | 2,513 | 96.8 | 75.1 | 35.0 | 10.6 | 3.5 |
| Mathematics General 2 | 2015 | 31,511 | 94.3 | 74.1 | 49.5 | 25.1 | 7.5 |
|  | 2014 | 31,321 | 94.5 | 74.7 | 48.7 | 24.0 | 6.4 |
|  | 2013 | 32,376 | 94.0 | 78.8 | 57.4 | 23.7 | 7.9 |
|  | 2012 | 31,702 | 94.4 | 77.7 | 48.6 | 19.7 | 5.5 |
| Mathematics | 2015 | 16,450 | 80.3 | 47.5 | 19.1 | 9.2 | 3.1 |
|  | 2014 | 16,693 | 78.2 | 46.1 | 18.3 | 8.5 | 3.5 |
|  | 2013 | 16,463 | 81.5 | 50.5 | 23.1 | 7.3 | 1.9 |
|  | 2012 | 16,700 | 81.8 | 47.4 | 20.7 | 9.2 | 3.3 |
| Mathematics Extension 1 | 2015 | 8,954 | 65.6 | 35.8 | 15.7 | 6.0 | 1.7 |
|  | 2014 | 9,022 | 69.6 | 36.8 | 15.4 | 5.8 | 1.9 |
|  | 2013 | 8,839 | 67.2 | 36.9 | 16.3 | 6.5 | 2.0 |
|  | 2012 | 8,925 | 64.4 | 35.1 | 14.9 | 5.5 | 1.7 |
| Mathematics Extension 2 | 2015 | 3,333 | 63.9 | 31.7 | 13.7 | 5.0 | 1.5 |
|  | 2014 | 3,371 | 68.5 | 35.2 | 13.5 | 5.0 | 1.3 |
|  | 2013 | 3,198 | 66.0 | 33.8 | 12.8 | 4.3 | 1.6 |
|  | 2012 | 3,454 | 61.9 | 30.7 | 11.5 | 4.2 | 1.2 |

Table 5.5 Distributions of scaled marks for English and Mathematics courses: 2012-2015

|  | Year | Enrolment | Percentage of students with scaled mark less than: |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 45 | 40 | 35 | 30 | 25 | 20 |
| English Standard | 2015 | 31,501 | 99.9 | 99.5 | 96.9 | 89.2 | 74.9 | 54.3 |
|  | 2014 | 31,483 | 99.9 | 99.6 | 97.2 | 90.0 | 75.9 | 55.8 |
|  | 2013 | 31,495 | 99.9 | 99.3 | 96.5 | 89.6 | 76.0 | 55.8 |
|  | 2012 | 31,803 | 99.9 | 99.3 | 96.5 | 89.7 | 77.3 | 57.3 |
| English Advanced | 2015 | 26,002 | 96.8 | 82.4 | 60.1 | 36.9 | 18.4 | 7.6 |
|  | 2014 | 26,729 | 97.6 | 83.4 | 60.3 | 37.1 | 19.2 | 8.1 |
|  | 2013 | 27,007 | 97.5 | 83.1 | 60.5 | 37.2 | 20.6 | 9.3 |
|  | 2012 | 27,217 | 97.8 | 83.3 | 60.8 | 39.2 | 21.8 | 9.2 |
| English Extension 1 | 2015 | 4,512 | 92.6 | 64.0 | 33.2 | 15.7 | 6.3 | 2.5 |
|  | 2014 | 4,848 | 92.8 | 67.1 | 38.3 | 17.4 | 6.1 | 1.9 |
|  | 2013 | 5,007 | 97.4 | 77.1 | 42.7 | 16.4 | 5.2 | 1.8 |
|  | 2012 | 5,265 | 96.9 | 74.6 | 41.1 | 17.8 | 6.6 | 2.4 |
| English Extension 2 | 2015 | 1,631 | 89.8 | 66.2 | 39.2 | 18.4 | 7.0 | 1.9 |
|  | 2014 | 1,776 | 90.0 | 68.8 | 41.6 | 20.0 | 8.2 | 2.2 |
|  | 2013 | 1,907 | 95.5 | 76.5 | 46.0 | 20.2 | 6.9 | 1.9 |
|  | 2012 | 2,126 | 94.7 | 75.0 | 45.3 | 18.3 | 5.4 | 1.0 |
| ESL | 2015 | 2,368 | 98.6 | 93.8 | 85.6 | 75.0 | 60.5 | 45.7 |
|  | 2014 | 2,291 | 98.3 | 93.6 | 85.0 | 73.9 | 59.7 | 44.8 |
|  | 2013 | 2,410 | 98.8 | 94.4 | 85.0 | 13.1 | 60.0 | 46.1 |
|  | 2012 | 2,513 | 98.5 | 93.5 | 85.1 | 72.7 | 59.3 | 44.9 |
| Mathematics General 2 | 2015 | 31,511 | 99.9 | 96.9 | 87.8 | 75.5 | 61.5 | 46.4 |
|  | 2014 | 31,321 | 99.9 | 97.5 | 88.4 | 75.4 | 60.9 | 45.6 |
|  | 2013 | 32,376 | 99.9 | 97.8 | 89.1 | 76.1 | 61.3 | 46.0 |
|  | 2012 | 31,702 | 99.9 | 97.8 | 89.4 | 76.7 | 62.9 | 47.4 |
| Mathematics | 2015 | 16,450 | 95.0 | 80.4 | 59.4 | 39.2 | 23.6 | 14.1 |
|  | 2014 | 16,693 | 95.3 | 78.4 | 59.0 | 40.4 | 25.3 | 14.5 |
|  | 2013 | 16,463 | 98.3 | 84.4 | 60.5 | 38.6 | 22.7 | 12.6 |
|  | 2012 | 16,700 | 96.3 | 81.3 | 61.6 | 41.7 | 25.8 | 14.7 |
| Mathematics Extension 1 | 2015 | 8,954 | 80.1 | 48.3 | 24.0 | 10.2 | 4.2 | 1.4 |
|  | 2014 | 9,022 | 81.6 | 47.3 | 21.9 | 9.3 | 3.9 | 1.6 |
|  | 2013 | 8,839 | 78.2 | 43.4 | 21.6 | 10.4 | 4.7 | 1.9 |
|  | 2012 | 8,925 | 81.3 | 48.8 | 24.4 | 10.4 | 4.0 | 1.3 |
| Mathematics Extension 2 | 2015 | 3,333 | 61.6 | 19.8 | 6.8 | 2.4 | 0.8 | 0.2 |
|  | 2014 | 3,371 | 63.9 | 18.2 | 5.6 | 1.8 | 0.6 | 0.3 |
|  | 2013 | 3,198 | 54.3 | 15.7 | 4.8 | 1.9 | 0.9 | 0.3 |
|  | 2012 | 3,454 | 64.8 | 19.5 | 5.8 | 2.1 | 0.7 | 0.2 |

### 5.3 Courses that contribute to the ATAR - Table A 6

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 2015, 32,789 students out of the 55,736 ATAR eligible students ( 58.8 per cent) 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 2015.
■ The second column shows the number of these students who completed more than 10 units.

- The third column expresses this number as a percentage.

The fourth column gives the percentage of these students who counted all units of that course towards their ATAR. The percentage is based on the number of students in the course who had completed more than 10 units.
The final column shows the maximum ATAR of any student doing the course in any year and including all units of that course in the ATAR calculation.
Of the 106 courses listed in Table A6, 76 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 W hy is my ATAR Iow 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 middle ATAR is 68.70 , 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 do not necessarily 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 similar, 38.7 and 39.0 respectively, but their ATARs are quite different, 55.90 and 81.60 respectively.

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


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 31.5 . Kellie has competed against students who have demonstrated higher academic achievement.

## 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 similar, 38.9 and 38.2 respectively, but their ATARs are quite different, 65.00 and 75.00 respectively.

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

| James |  |  |  |
| :--- | :--- | :---: | :---: |
| ATAR | Course | HSC mark <br> per course | HSC mark <br> per unit |
|  | Business Studies | 79 | 39.5 |
|  | Dance | 70 | 35.0 |
|  | English Standard | 79 | 39.5 |
|  | Industrial Technology | 76 | 38.0 |
|  | Mathematics General 2 | 85 | 42.5 |


| Amy |  |  |  |
| :--- | :--- | :---: | :---: |
| ATAR | Course | HSC mark <br> per course | HSC mark <br> per unit |
| 75.00 | Biology | 78 | 39.0 |
|  | Chemistry | 73 | 36.5 |
|  | English Advanced | 79 | 39.5 |
|  | Mathematics | 16 | 38.0 |
|  | French Continuers | 76 | 38.0 |

Amy has an ATAR that is almost the same as her average HSC course score (\%6.4) whereas James's ATAR is much lower than his average HSC course score (77.8). In tact his average HSC score is higher than Amy's. 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 31.3 .

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 <br> unit | Percentile | HSC mark per <br> unit | Percentile |  |
| Biology | 35.0 | 43 | 40.0 | 75 |  |
| Business Studies | 35.0 | 36 | 40.0 | 67 |  |
| English Advanced | 35.0 | 11 | 40.0 | 47 |  |
| Mathematics | 35.0 | 21 | 40.0 | 51 |  |
| Modern History | 35.0 | 30 | 40.0 | 59 |  |
| Visual Arts | 35.0 | 14 | 40.0 | 51 |  |
| ATAR | 579.65 |  |  |  |  |

Their HSC marks per unit in each course differ by only 5 , yet their ATARs differ by 22.15. 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 2014. 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 their ATARs for 2009 to 2015.

Table 6.4 ATARs for Fred and Laura: 2009-2015

| Year | Fred | Laura |
| :---: | :---: | :---: |
| 2009 | 57.80 | 81.20 |
| 2010 | 57.05 | 80.15 |
| 2011 | 58.20 | 79.80 |
| 2012 | 57.45 | 79.65 |
| 2013 | 57.55 | 80.00 |
| 2014 | 55.95 | 79.45 |
| 2015 | 57.50 | 79.65 |

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

### 6.2 W hy 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's ATAR Advice Notice shows 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.

They show 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

| Course |  |  |  | $P_{90}$ |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | Number | Scaled mean | Scaled SD | HSC mark <br> per unit | Scaled <br> mark |
| Ancient History | 10,748 | 24.0 | 10.7 | 44.5 | 38.1 |
| Biology | 17,269 | 26.5 | 10.0 | 43.5 | 39.2 |
| Business Studies | 16,561 | 23.8 | 10.9 | 44.5 | 38.3 |
| Physics | 9,510 | 30.4 | 9.8 | 44.0 | 42.3 |
| Visual Arts | 9,003 | 22.2 | 11.1 | 45.0 | 37.6 |

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.

A student in Biology with an HSC mark of 43.5 can receive a higher scaled mark than a student in Ancient History or Business Studies with an HSC mark of 44.5 due to the differences in the strength of the competition reflected in the scaled means.
Notice also that the course with the highest HSC mark, Visual Arts, has the lowest scaled mark.
The HSC mark on its own does not give a clear indication of the contribution a course makes towards a student's aggregate.

## Example 2 - Position

Consider students with HSC marks of 47.5 per unit in Geography and French Continuers. The student in Geography is at the 99th percentile and gains a scaled mark of 46.3 whereas the student in French Continuers is at the 90th percentile and gets a scaled mark of 45.2. Therefore, even though the scaled mean for French Continuers, 35.1 , is much higher than the scaled mean for Geography, 25.3, the difference in position compensates for this and the Geography student gets the higher scaled mark.

Table 6.6 HSC and scaled marks

|  | Scaled mean | Scaled SD | Percentile | HSC mark <br> per unit | Scaled mark |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Geography | 25.3 | 11.1 | $\mathrm{P}_{99}$ | 47.5 | 46.3 |
| French Continuers | 35.1 | 8.6 | $\mathrm{P}_{90}$ | 47.5 | 45.2 |

## 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

| Course |  |  | $\mu_{90}$ |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Scaled SD | HSC mark <br> per unit | Scaled mark |  |
| Music 1 |  |  | 46.0 | 35.1 |
| Arabic Extension | 21.1 | 10.5 | 46.0 | 32.6 |

Consider students at the yuth percentile of Music 1 with HSC mark 46.0 per unit and scaled mark of 35.7 per unit and at the 90th percentile of Arabic Extension with HSC mark of 46.0 and scaled mark of 32.6. Arabic Extension has a scaled mean of 23.9 whereas Music 1 has a scaled mean of 21.1.
The course with the lower scaled mean has the higher scaled mark corresponding to the HSC mark of 46.0 even though the position is the same in both courses. The reason the scaled marks differ is the spread in the distribution as measured by the standard deviation (SD). Arabic Extension has a SD of 6.6 but Music 1 has a SD of 10.5. Music 1 has a candidature with more varied academic ability than Arabic Extension.

Example 4 - Raw vs 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 and 90th percentiles, we see that candidates receiving the top HSC mark of 50 in Music Extension received scaled marks from 50.0 to 48.6. The top HSC mark in a course does not necessarily reflect the top raw mark in a course and so a candidate with HSC mark of 50 may not receive the top scaled mark.
The pattern of several scaled marks corresponding to a given HSC mark can occur across the distribution, not just at the top of the range.

### 6.3 O ther 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 the Board of Studies, Teaching and Educational Standards NSW; 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 reiation 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 AIARs. why not?
Your ATARs would be similar it your courses were the same.

## Which course should I study?

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

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. It 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.

If I'm eligible to get bonus points, does my ATAR change?
No. Bonus points do not change your ATAR. They change your selection rank for a particular preference or course.
If bonus points don't increase my ATAR, then how do they work?
Universities allocate bonus points for different reasons. Examples include students with strong performance in specific HSC courses, students who live in or attend school in an area defined by the university and students who have applied for consideration through Educational Access Schemes.
As the bonus points schemes for each university, and often each course at the same university, are different, your selection rank can be different for each course you list in your course preferences. For most Year 12 applicants, their selection rank for each preference is their ATAR. However if a university allocates bonus points to you for a particular course then your selection rank for that preference is your ATAR + bonus points.

## 7 Appendix

The following courses are not included in Tables A2 to A5 as they had less than 10 students in 2015:

- Arabic Beginners

■ Classical Greek Extension

- Croatian
- Dutch
- Hungarian
- Heritage Indonesian
- Khmer
- 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 2015 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 or less than four ATAR-eligible students and no percentile data are given for courses with less than 40 students.
Table A4 Distributions of HSC marks by course: 2015 and 2014 Excludes courses with less than 40 students in either year.
Table A5 Distributions of scaled marks by course: 201b and 2014 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: 2011-2015
Table A9 Relationship between the ATAR and aggregates: 2011-2015

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 2015 or in a previous year (and who have done at least one ATAR course in 2015).
(ii) The Number HSC column shows the number of students who completed the course in 2015 or in a previous year and received an HSC award in 2015.
(iii) The Number ATAR column shows the number of students who completed the course in 2015 or in a previous year and who were eligible for an ATAR in 2015.
(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 2015.
(vi) The \% ATAR eligible column shows the percentage of students in the course who were eligible for an ATAR in 2015.
(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 | 443 | 383 | 216 | 69.5 | 86.5 | 48.8 | 99.95 |
| Agriculture | 1,433 | 1,337 | 1,048 | 49.8 | 93.3 | 73.1 | 99.95 |
| Ancient History | 10,923 | 10,594 | 9,765 | 57.5 | 97.0 | 89.4 | 99.95 |
| Biology | 17,647 | 17,150 | 16,638 | 61.0 | 97.2 | 94.3 | 99.95 |
| Business Studies | 16,844 | 16,319 | 15,226 | 47.5 | 96.9 | 90.4 | 99.95 |
| Chemistry | 11,140 | 10,891 | 10,841 | 45.0 | 97.8 | 97.3 | 99.95 |
| Community and Family Studies | 8,062 | 7,874 | 6,344 | 92.1 | 97.7 | 78.7 | 98.40 |
| Dance | 926 | 885 | 775 | 95.5 | 95.6 | 83.1 | 98.65 |
| Design and Technology | 3,226 | 3,090 | 2,687 | 40.3 | 95.8 | 83.3 | 99.05 |
| Drama | 4,681 | 4,536 | 4,073 | 68.8 | 96.9 | 87.0 | 99.85 |
| Earth and Environmental Science | 1,508 | 1,463 | 1,334 | 40.1 | 97.0 | 88.5 | 99.85 |
| Economics | ऽ,16] | 5,094 | 5,080 | 35.1 | 98.7 | 98.4 | 99.95 |
| Engineering Studles | 2,083 | 2,039 | 1,985 | 5.1 | 97.9 | 95.3 | 99.85 |
| English Standard | 31,946 | 30,988 | 27,695 | 48.3 | 97.0 | 86.7 | 99.35 |
| English Advanced | 26,273 | 25,968 | 25,836 | 58.9 | 98.8 | 98.3 | 99.95 |
| English Extension 1 | 4,546 | 4,513 | 4,503 | 69.2 | 99.3 | 99.1 | 99.95 |
| English Extension 2 | 1,638 | 1,633 | 1,627 | 72.3 | 99.7 | 99.3 | 99.95 |
| ESL | 2,414 | 2,321 | 2,205 | 49.9 | 96.1 | 91.3 | 99.95 |
| Food Technology | 3,402 | 3,289 | 2,658 | 75.8 | 96.7 | 78.1 | 99.35 |
| Geography | 4,353 | 4,188 | 3,885 | 44.8 | 96.2 | 89.2 | 99.85 |
| Industrial Technology | 5,641 | 5,439 | 3,820 | 12.2 | 96.4 | 67.7 | 98.65 |
| Information Processes and Technology | 3,047 | 2,772 | 2,513 | 19.4 | 91.0 | 82.5 | 99.95 |
| Legal Studies | 10,405 | 10,135 | 9,625 | 60.1 | 97.4 | 92.5 | 99.95 |
| Mathematics General 2 | 32,022 | 31,168 | 28,008 | 49.9 | 97.3 | 87.5 | 99.85 |
| Mathematics | 17,044 | 15,474 | 15,423 | 46.0 | 90.8 | 90.5 | 99.95 |
| Mathematics Extension 1 | 9,251 | 8,799 | 8,797 | 41.5 | 95.1 | 95.1 | 99.95 |
| Mathematics Extension 2 | 3,372 | 3,302 | 3,302 | 36.2 | 97.9 | 97.9 | 99.95 |
| Modern History | 11,209 | 10,937 | 10,327 | 53.7 | 97.6 | 92.1 | 99.95 |
| History Extension | 1,883 | 1,877 | 1,877 | 64.2 | 99.7 | 99.7 | 99.95 |
| Music 1 | 4,837 | 4,586 | 3,907 | 49.6 | 94.8 | 80.8 | 99.45 |
| Music 2 | 733 | 694 | 693 | 50.1 | 94.7 | 94.5 | 99.95 |
| Music Extension | 438 | 434 | 433 | 53.0 | 99.1 | 98.9 | 99.95 |
| PDHPE | 15,263 | 14,878 | 13,598 | 53.2 | 97.5 | 89.1 | 99.90 |
| Physics | 9,619 | 9,433 | 9,373 | 22.1 | 98.1 | 97.4 | 99.95 |
| Senior Science | 6,387 | 6,226 | 5,086 | 45.4 | 97.5 | 79.6 | 99.05 |
| Society and Culture | 4,668 | 4,490 | 4,187 | 79.7 | 96.2 | 89.7 | 99.90 |

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

| Course | Number all | Number HSC | Number ATAR | \% Female | \% HSC | \% ATAR eligible | Maximum ATAR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Software Design and Development | 1,879 | 1,788 | 1,680 | 5.8 | 95.2 | 89.4 | 99.95 |
| Studies of Religion I | 9,311 | 8,879 | 8,690 | 52.8 | 95.4 | 93.3 | 99.85 |
| Studies of Religion II | 5,989 | 5,870 | 5,704 | 65.4 | 98.0 | 95.2 | 99.85 |
| Textiles and Design | 1,671 | 1,636 | 1,402 | 98.7 | 97.9 | 83.9 | 99.90 |
| Visual Arts | 9,129 | 8,761 | 7,506 | 71.6 | 96.0 | 82.2 | 99.95 |
| Arabic Continuers | 189 | 179 | 152 | 64.6 | 94.7 | 80.4 | 98.95 |
| Arabic Extension | 56 | 54 | 47 | 58.9 | 96.4 | 83.9 | 98.95 |
| Armenian | 28 | 20 | 20 | 71.4 | 71.4 | 71.4 | 99.20 |
| Chinese Beginners | 27 | 26 | 26 | 63.0 | 96.3 | 96.3 | 95.60 |
| Chinese Continuers | 105 | 101 | 101 | 50.5 | 96.2 | 96.2 | 99.85 |
| Chinese Extension | 24 | 23 | 23 | 20.8 | 95.8 | 95.8 | 99.85 |
| Chinese Background Speakers | 682 | 668 | 660 | 58.1 | 97.9 | 96.8 | 99.25 |
| Heritage Chinese (Mandarin) | 129 | 128 | 126 | 79.1 | 99.2 | 97.7 | 99.90 |
| Classical Greek Continuers | 14 | 12 | 12 | 57.1 | 85.7 | 85.7 | 99.95 |
| Classical Hebrew Continuers | 33 | 33 | 33 | 63.6 | 100.0 | 100.0 | 99.25 |
| Classical Hebrew Extension | 22 | 22 | 22 | 59.1 | 100.0 | 100.0 | 98.70 |
| Croatian | 10 | 9 | 8 | 50.0 | 90.0 | 80.0 | 97.45 |
| Filipino | 10 | 10 | 10 | 70.0 | 100.0 | 100.0 | 96.55 |
| French Beginners | 652 | 627 | 568 | 79.3 | 96.2 | 87.1 | 99.65 |
| French Continuers | 770 | 739 | 734 | 69.4 | 96.0 | 95.3 | 99.95 |
| French Extension | 171 | 169 | 169 | 61.4 | 98.8 | 98.8 | 99.95 |
| German Beginners | 111 | 105 | 103 | 66.7 | 94.6 | 92.8 | 99.90 |
| German Continuers | 254 | 234 | 233 | 60.2 | 92.1 | 91.7 | 99.95 |
| German Extensıon | 70 | 66 | 66 | 67.1 | 94.3 | 94.3 | 99.95 |
| Hindi | 31 | 26 | 26 | 77.4 | 83.9 | 83.9 | 99.50 |
| Indonesian Beginners | 39 | 39 | 38 | 66.7 | 100.0 | 97.4 | 94.85 |
| Indonesian Continuers | 63 | 63 | 62 | 69.8 | 100.0 | 98.4 | 99.35 |
| Indonesian Extension | 16 | 16 | 16 | 68.8 | 100.0 | 100.0 | 99.35 |
| Indonesian Background Speakers | 72 | 72 | 72 | 69.4 | 100.0 | 100.0 | 97.55 |
| Italian Beginners | 364 | 362 | 326 | 73.9 | 99.5 | 89.6 | 99.90 |
| Italian Continuers | 294 | 279 | 273 | 70.4 | 94.9 | 92.9 | 99.80 |
| Italian Extension | 59 | 57 | 56 | 62.7 | 96.6 | 94.9 | 99.80 |
| J apanese Beginners | 655 | 627 | 592 | 60.5 | 95.7 | 90.4 | 99.65 |
| Japanese Continuers | 671 | 652 | 644 | 62.9 | 97.2 | 96.0 | 99.95 |
| Japanese Extension | 209 | 206 | 206 | 66.0 | 98.6 | 98.6 | 99.90 |
| Japanese Background Speakers | 19 | 19 | 16 | 47.4 | 100.0 | 84.2 | 96.75 |
| Heritage J apanese | 20 | 20 | 20 | 65.0 | 100.0 | 100.0 | 97.05 |
| Korean Continuers | 17 | 17 | 16 | 88.2 | 100.0 | 94.1 | 95.40 |
| Korean Background Speakers | 57 | 56 | 55 | 54.4 | 98.2 | 96.5 | 99.90 |
| Heritage Korean | 65 | 63 | 63 | 67.7 | 96.9 | 96.9 | 99.60 |
| Latin Continuers | 197 | 195 | 195 | 46.2 | 99.0 | 99.0 | 99.95 |
| Latin Extension | 130 | 130 | 130 | 50.0 | 100.0 | 100.0 | 99.95 |
| Macedonian | 17 | 16 | 16 | 52.9 | 94.1 | 94.1 | 95.30 |
| Modern Greek Beginners | 69 | 69 | 66 | 71.0 | 100.0 | 95.7 | 97.80 |
| Modern Greek Continuers | 107 | 90 | 86 | 68.2 | 84.1 | 80.4 | 98.80 |
| Modern Greek Extension | 48 | 38 | 37 | 70.8 | 79.2 | 77.1 | 98.10 |

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

| Course | Number all | Number HSC | Number <br> ATAR | \% Female | \% HSC | \% ATAR eligible | Maximum ATAR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Modern Hebrew | 51 | 47 | 47 | 56.9 | 92.2 | 92.2 | 99.65 |
| Persian | 33 | 27 | 27 | 42.4 | 81.8 | 81.8 | 94.45 |
| Polish | 18 | 15 | 13 | 61.1 | 83.3 | 72.2 | 94.85 |
| Portuguese | 14 | 14 | 14 | 71.4 | 100.0 | 100.0 | 91.10 |
| Russian | 27 | 26 | 26 | 66.7 | 96.3 | 96.3 | 99.00 |
| Serbian | 17 | 17 | 16 | 64.7 | 100.0 | 94.1 | 99.90 |
| Spanish Beginners | 179 | 171 | 166 | 71.5 | 95.5 | 92.7 | 99.85 |
| Spanish Continuers | 151 | 148 | 141 | 70.9 | 98.0 | 93.4 | 99.75 |
| Spanish Extension | 47 | 47 | 46 | 68.1 | 100.0 | 97.9 | 98.25 |
| Swedish | 17 | 9 | 9 | 64.7 | 52.9 | 52.9 | 93.75 |
| Tamil | 64 | 31 | 31 | 68.8 | 48.4 | 48.4 | 98.85 |
| Turkish | 51 | 35 | 34 | 58.8 | 68.6 | 66.7 | 95.75 |
| Vietnamese | 147 | 135 | 124 | 59.2 | 91.8 | 84.4 | 99.95 |
| Automotive Exam | 493 | 395 | 179 | 7.7 | 80.1 | 36.3 | 87.65 |
| Business Services Exam | 1,202 | 1,082 | 888 | 75.8 | 90.0 | 73.9 | 97.80 |
| Construction Exam | 1,738 | 1,611 | 1,071 | 2.3 | 92.7 | 61.6 | 94.55 |
| Electrotechnology Exam | 301 | 279 | 177 | 3.0 | 92.7 | 58.8 | 95.15 |
| Entertainment Industry Exam | 933 | 915 | 829 | 61.0 | 98.1 | 88.9 | 97.10 |
| Financial Services Exam | 158 | 151 | 149 | 48.1 | 95.6 | 94.3 | 99.80 |
| Hospitality Exam | 5,467 | 5,046 | 4,364 | 74.6 | 92.3 | 79.8 | 99.15 |
| Human Services Exam | 596 | 579 | 492 | 91.3 | y 7.1 | 82.6 | 95.65 |
| Information and Digital Technology Exam | 975 | 854 | 742 | 12.3 | 87.6 | 76.1 | 99.30 |
| Metal and Engineering Exam | 622 | 542 | 307 | 2.4 | 87.1 | 49.4 | 88.90 |
| Primary Industries Exam | 645 | 598 | 396 | 49.6 | 92.7 | 61.4 | 96.20 |
| Retail Services Exam | 1,143 | 1,019 | 819 | 71.3 | 89.2 | 71.7 | 97.80 |
| Tourism Travel and Events Exam | 340 | 335 | 280 | 88.8 | 98.5 | 82.4 | 96.25 |
|  |  |  |  |  |  |  |  |
| Total | 72,238 | 65,279 | 55,736 | 51.4 | 90.4 | 77.2 | 99.95 |

## Table A2 Distributions of 2015 HSC marks by course

Notes: (i) The Number column shows the number of students who completed the course in 2015.
(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 | 400 | 67 | 3 | 6 | 18 | 21 | 21 | 24 |
| Agriculture | 1,344 | 73 | 4 | 7 | 22 | 32 | 24 | 13 |
| Ancient History | 10,748 | 74 | 4 | 8 | 25 | 28 | 22 | 10 |
| Biology | 17,269 | 73 | 4 | 6 | 22 | 32 | 24 | 11 |
| Business Studies | 16,561 | 75 | 4 | 8 | 28 | 30 | 22 | 9 |
| Chemistry | 10,905 | 77 | 4 | 11 | 30 | 32 | 20 | 5 |
| Community and Family Studies | 7,957 | 75 | 4 | 6 | 27 | 33 | 21 | 10 |
| Dance | 901 | 78 | 4 | 12 | 33 | 33 | 19 | 2 |
| Design and Technology | 3,148 | 77 | 4 | 12 | 25 | 43 | 16 | 4 |
| Drama | 4,593 | 78 | 4 | 14 | 28 | 40 | 16 | 2 |
| Earth and Environmental Science | 1,468 | 77 | 4 | 8 | 35 | 29 | 19 | 7 |
| Economics | 5,089 | 78 | 4 | 11 | 35 | 29 | 18 | 5 |
| Engineering Studies | 2,054 | 76 | 4 | 9 | 28 | 34 | 23 | 5 |
| English Standard | 31,501 | 68 | 3 | $<1$ | 8 | 34 | 42 | 12 |
| English Advanced | 26,002 | 81 | 5 | 15 | 42 | 33 | 8 | 1 |
| English Extension 1 | 4,512 | 43 | E3 |  |  | 35 | 60 | 6 |
| English Extension 2 | 1,631 | 41 | E3 |  |  | 26 | 56 | 17 |
| ESL | 2,368 | 73 | 4 | 4 | 22 | 35 | 22 | 12 |
| Food Technology | 3,361 | 72 | 4 | 8 | 21 | 28 | 23 | 16 |
| Geography | 4,275 | 77 | 4 | 9 | 33 | 25 | 21 | 9 |
| Industrial Technology | 5,512 | 71 | 4 | 8 | 18 | 28 | 24 | 15 |
| Information Processes and Technology | 2,814 | 75 | 4 | 7 | 26 | 34 | 19 | 10 |
| Legal Studies | 10,297 | 76 | 4 | 11 | 30 | 28 | 21 | 7 |
| Mathematics General 2 | 31,511 | 70 | 4 | 6 | 20 | 25 | 24 | 18 |
| Mathematics | 16,450 | 80 | 5 | 20 | 33 | 28 | 10 | 6 |
| Mathematics Extension 1 | 8,954 | 42 | E3 |  |  | 34 | 50 | 14 |
| Mathematics Extension 2 | 3,333 | 86 | E3 |  |  | 36 | 50 | 12 |
| Modern History | 11,053 | 78 | 4 | 12 | 32 | 29 | 18 | 6 |
| History Extension | 1,878 | 40 | E3 |  |  | 22 | 56 | 19 |
| Music 1 | 4,710 | 82 | 5 | 17 | 45 | 27 | 9 | 2 |
| Music 2 | 694 | 88 | 5 | 37 | 51 | 12 | $<1$ | $<1$ |
| Music Extension | 424 | 46 | E4 |  |  | 56 | 37 | 7 |
| PDHPE | 15,082 | 73 | 4 | 9 | 21 | 33 | 28 | 7 |
| Physics | 9,510 | 74 | 4 | 8 | 20 | 37 | 23 | 6 |
| Senior Science | 6,320 | 73 | 4 | 8 | 21 | 33 | 24 | 10 |
| Society and Culture | 4,566 | 79 | 4 | 12 | 35 | 34 | 14 | 3 |

Table A2 Distributions of 2015 HSC marks by course (continued)

| Course | Number | Median HSC <br> mark | Median Band | Percentage students in Performance Band |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 6 | 5 | 4 | 3 | 2 |
| Software Design and Development | 1,783 | 75 | 4 | 8 | 22 | 37 | 22 | 9 |
| Studies of Religion I | 8,951 | 40 | 5 | 13 | 38 | 27 | 18 | 4 |
| Studies of Religion II | 5,902 | 77 | 4 | 6 | 34 | 31 | 19 | 7 |
| Textiles and Design | 1,635 | 79 | 4 | 15 | 32 | 32 | 15 | 4 |
| Visual Arts | 9,003 | 80 | 5 | 13 | 41 | 34 | 10 | 1 |
| Arabic Continuers | 182 | 81 | 5 | 10 | 47 | 27 | 10 | 3 |
| Arabic Extension | 53 | 38 | E3 |  |  | 23 | 53 | 25 |
| Armenian | 18 | 81 | 5 | 17 | 44 | 33 | 6 |  |
| Chinese Beginners | 27 | 85 | 5 | 33 | 33 | 11 | 15 | 7 |
| Chinese Continuers | 102 | 91 | 6 | 54 | 15 | 21 | 8 | 3 |
| Chinese Extension | 24 | 46 | E4 |  |  | 92 | 8 |  |
| Chinese Background Speakers | 660 | 82 | 5 | 13 | 56 | 27 | 3 | 1 |
| Heritage Chinese (Mandarin) | 127 | 85 | 5 | 27 | 55 | 16 | 2 |  |
| Classical Greek Continuers | 14 | 92 | 6 | 64 | 29 | 7 |  |  |
| Classical Hebrew Continuers | 31 | 88 | 5 | 39 | 35 | 10 | 13 | 3 |
| Classical Hebrew Extension | 22 | 45 | E4 |  |  | 73 | 27 |  |
| Filipino | 10 | 96 | 6 | 90 | 10 |  |  |  |
| French Beginners | 647 | 78 | 4 | 22 | 23 | 27 | 16 | 8 |
| French Continuers | 727 | 84 | 5 | 31 | 36 | 20 | 11 | 2 |
| French Extension | 166 | 43 | E3 |  |  | 36 | 55 | 9 |
| German Beginners | 111 | 80 | 5 | 31 | 23 | 28 | 13 | 3 |
| German Contınuers | 238 | 82 | 5 | 23 | 34 | 27 | 11 | 4 |
| German Extension | 68 | 42 | E3 |  |  | 34 | 63 | 1 |
| Hindi | 26 | 91 | 6 | 54 | 31 | 8 | 4 | 4 |
| Indonesian Beginners | 39 | 78 | 4 | 18 | 26 | 28 | 23 | 5 |
| Indonesian Continuers | 63 | 82 | 5 | 29 | 27 | 22 | 16 | 6 |
| Indonesian Extension | 16 | 42 | E3 |  |  | 25 | 50 | 25 |
| Indonesian Background Speakers | 72 | 76 | 4 |  | 17 | 72 | 11 |  |
| Italian Beginners | 361 | 75 | 4 | 17 | 24 | 20 | 22 | 11 |
| Italian Continuers | 272 | 81 | 5 | 21 | 33 | 24 | 19 | 3 |
| Italian Extension | 57 | 44 | E3 |  |  | 40 | 44 | 16 |
| J apanese Beginners | 642 | 74 | 4 | 13 | 25 | 23 | 21 | 11 |
| J apanese Continuers | 659 | 81 | 5 | 19 | 36 | 23 | 19 | 3 |
| Japanese Extension | 208 | 42 | E3 |  |  | 33 | 55 | 11 |
| Japanese Background Speakers | 19 | 82 | 5 | 16 | 37 | 37 | 11 |  |
| Heritage J apanese | 20 | 86 | 5 | 30 | 45 | 20 | 5 |  |
| Korean Continuers | 17 | 94 | 6 | 59 | 35 | 6 |  |  |
| Korean Background Speakers | 54 | 83 | 5 | 19 | 44 | 30 | 4 | 4 |
| Heritage Korean | 64 | 91 | 6 | 63 | 27 | 9 | 2 |  |
| Latin Continuers | 194 | 90 | 6 | 52 | 30 | 12 | 3 | 2 |
| Latin Extension | 129 | 47 | E4 |  |  | 78 | 20 | 2 |
| Macedonian | 17 | 90 | 6 | 53 | 29 | 18 |  |  |

Table A2 Distributions of 2015 HSC marks by course (continued)

| Course | Number | Median HSC <br> mark | Median Band | Percentage students in Performance Band |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 6 | 5 | 4 | 3 | 2 |
| M odern Greek Beginners | 69 | 85 | 5 | 35 | 36 | 16 | 7 | 6 |
| Modern Greek Continuers | 95 | 84 | 5 | 26 | 41 | 28 | 4 |  |
| Modern Greek Extension | 43 | 45 | E4 |  |  | 51 | 49 |  |
| Modern Hebrew | 39 | 90 | 6 | 51 | 41 | 8 |  |  |
| Persian | 31 | 79 | 4 | 10 | 39 | 29 | 23 |  |
| Polish | 17 | 94 | 6 | 71 | 18 | 6 | 6 |  |
| Portuguese | 12 | 88 | 5 | 25 | 42 | 25 | 8 |  |
| Russian | 25 | 90 | 6 | 52 | 40 | 8 |  |  |
| Serbian | 17 | 90 | 6 | 53 | 47 |  |  |  |
| Spanish Beginners | 177 | 77 | 4 | 10 | 32 | 35 | 19 | 4 |
| Spanish Continuers | 150 | 78 | 4 | 7 | 37 | 30 | 22 | 4 |
| Spanish Extension | 46 | 41 | E3 |  |  | 13 | 78 | 9 |
| Tamil | 34 | 89 | 5 | 47 | 53 |  |  |  |
| Turkish | 41 | 87 | 5 | 34 | 39 | 20 | 5 | 2 |
| Vietnamese | 145 | 79 | 4 | 5 | 38 | 48 | 8 | 2 |
| Automotive Exam | 463 | 67 | 3 | 1 | 12 | 27 | 38 | 19 |
| Business Services Exam | 1,140 | 73 | 4 | 4 | 26 | 32 | 30 | 7 |
| Construction Exam | 1,637 | 73 | 4 | 1 | 18 | 47 | 23 | 11 |
| Electrotechnology Exam | 283 | 70 | 4 | 1 | 10 | 40 | 35 | 11 |
| Entertainment Industry Exam | 918 | 72 | 4 | 1 | 23 | 38 | 34 | 4 |
| Financial Services Exam | 152 | 74 | 4 | 10 | 21 | 36 | 24 | 6 |
| Hospitality Exam | 5,180 | 76 | 4 | 4 | 29 | 41 | 22 | 3 |
| Human Services Exam | 585 | 72 | 4 | 1 | 16 | 43 | 29 | 10 |
| Information and Digital Technology Exam | 903 | 12 | 4 | 2 | 13 | 47 | 33 | 5 |
| Metal and Engineering Exam | 565 | 66 | 3 | <1 | 7 | 24 | 49 | 18 |
| Primary Industries Exam | 603 | 76 | 4 | 3 | 29 | 40 | 19 | 7 |
| Retail Services Exam | 1,072 | 73 | 4 | <1 | 21 | 43 | 25 | 9 |
| Tourism Travel and Events Exam | 338 | 74 | 4 | 1 | 25 | 48 | 16 | 9 |

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 2015.
(ii) The $\mathrm{P}_{99}, \mathrm{P}_{90}, \mathrm{P}_{75}, \mathrm{P}_{50}, \mathrm{P}_{25}$ columns refer to the 99 th, 90 th, 75 th, 50 th and 25 th percentiles respectively.
(iii) The table excludes courses with less than 10 students or less than four ATAR-eligible students and no percentile data are given for courses with less than 40 students.
(iv) This table should not be used as a simple HSC to scaled mark conversion table. For each HSC mark there can be a range of raw marks and therefore a range of scaled marks.

| Course | Number | Type of mark | Mean | SD | Max. mark | P99 | P90 | P75 | P50 | P25 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Aboriginal Studies | 400 | HSC | 33.5 | 7.8 | 48.0 | 47.0 | 44.0 | 39.5 | 33.5 | 28.5 |
|  |  | scaled | 13.3 | 12.1 | 43.1 | 41.3 | 34.0 | 21.3 | 8.7 | 3.2 |
| Agriculture | 1,344 | HSC | 36.1 | 6.1 | 49.0 | 47.0 | 44.0 | 40.5 | 36.5 | 32.0 |
|  |  | scaled | 19.9 | 11.5 | 47.1 | 43.3 | 36.6 | 28.6 | 18.9 | 10.5 |
| Ancient History | 10,748 | HSC | 35.9 | 7.2 | 49.5 | 48.0 | 44.5 | 41.0 | 37.0 | 32.0 |
|  |  | scaled | 24.0 | 10.7 | 49.6 | 45.5 | 38.1 | 32.0 | 24.6 | 16.1 |
| Biology | 17,269 |  | 35.8 | 6.3 | 48.5 | 46.5 | 43.5 | 40.5 | 36.5 | 32.0 |
|  |  | scaled | 26.5 | 10.0 | 50.0 | 45.1 | 39.2 | 34.1 | 27.2 | 19.3 |
| Business Studies | 16,561 |  | 37.0 | 6.1 | 49.0 | 47.0 | 44.5 | 41.5 | 37.5 | 33.0 |
|  |  | scaled | 23.8 | 10.9 | 49.5 | 45.0 | 38.3 | 32.5 | 24.0 | 15.2 |
| Chemistry | 10,905 | HSC |  | 5.6 | 49.5 | 47.5 | 45.0 | 42.5 | 38.5 | 34.5 |
|  |  | scaled | 31.6 | 9.6 | 50.0 | 47.1 | 43.1 | 39.2 | 32.9 | 25.2 |
| Community and Family Studies | 7,957 | HSC | 36.6 | 5.9 | 50.0 | 47.0 | 43.5 | 41.0 | 37.5 | 33.0 |
|  |  | scaled | 19.0 | 10.4 | 44.4 | 40.2 | 33.8 | 27.3 | 18.4 | 10.2 |
| Dance | 901 | HSC | 38.8 | 5.4 | 50.0 | 48.0 | 45.5 | 43.0 | 39.0 | 35.0 |
|  |  | scaled | 22.8 | 10.8 | 47.5 | 44.1 | 38.4 | 31.2 | 22.1 | 14.2 |
| Design and Technology | 3,148 |  | 38.4 | 4.8 | 49.5 | 48.0 | 45.0 | 41.5 | 38.5 | 35.5 |
|  |  | scaled | 21.5 | 10.2 | 46.4 | 43.1 | 36.3 | 29.1 | 20.7 | 13.4 |
| Drama | 4,593 |  | 39.1 |  |  |  | 45.5 | 42.5 | 39.0 | 36.0 |
|  |  | scaled | 23.8 | 10.5 | 49.4 | 45.8 | 38.5 | 31.7 | 23.5 | 15.7 |
| Earth and Environmental Science | 1,468 | HSC | 37.8 | 5.7 | 48.5 | 47.0 | 44.0 | 42.0 | 38.5 | 34.0 |
|  |  |  | 23.4 | 10.3 | 47.8 | 43.7 | 36.9 | 31.4 | 23.3 | 15.1 |
| Economics | 5,089 | HSC | 38.3 | 5.9 | 49.0 | 47.5 | 45.0 | 42.5 | 39.0 | 34.5 |
|  |  |  | 32.2 | 9.5 | 50.0 | 47.4 | 43.5 | 39.6 | 33.6 | 26.1 |
| Engineering Studies | 2,054 | HSC | 37.7 | 5.3 | 48.5 | 47.5 | 44.5 | 41.5 | 38.0 | 34.0 |
|  |  |  | 25.4 | 9.7 | 48.2 | 45.0 | 38.3 | 32.6 | 25.6 | 18.2 |
| English Standard | 31,501 |  | 33.8 | 4.8 | 48.5 | 43.5 | 39.5 | 37.0 | 34.0 | 31.0 |
|  |  | scaled | 19.5 | 8.0 | 48.5 | 38.4 | 30.3 | 25.0 | 19.1 | 13.5 |
| English Advanced | 26,002 |  | 40.4 | 4.1 | 49.5 | 47.5 | 45.5 | 43.5 | 40.5 | 38.0 |
|  |  | scaled | 32.2 | 8.0 | 50.0 | 46.7 | 42.3 | 38.2 | 32.8 | 27.0 |
| English Extension 1 | 4,512 | HSC | 42.2 | 4.3 | 50.0 | 48.0 | 47.0 | 45.0 | 43.0 | 40.0 |
|  |  | scaled | 36.7 | 6.8 | 50.0 | 47.6 | 44.3 | 41.7 | 37.9 | 33.0 |
| English Extension 2 | 1,631 | HSC | 40.1 | 5.7 | 50.0 | 50.0 | 47.0 | 45.0 | 41.0 | 36.0 |
|  |  | scaled | 36.4 | 7.2 | 50.0 | 48.8 | 45.2 | 41.8 | 37.2 | 31.6 |
| ESL | 2,368 | HSC | 35.7 | 6.3 | 48.0 | 46.5 | 43.0 | 40.0 | 36.5 | 32.0 |
|  |  |  | 21.9 | 11.1 | 48.8 | 45.9 | 37.4 | 30.0 | 21.3 | 13.2 |

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

| Course | Number | Type of mark | Mean | SD | Max. mark | P99 | P90 | P75 | P50 | P25 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Food Technology | 3,361 | HSC | 35.5 | 6.8 | 50.0 | 48.0 | 44.0 | 40.5 | 36.0 | 30.5 |
|  |  | scaled | 19.7 | 11.0 | 46.1 | 42.4 | 35.7 | 28.2 | 18.4 | 10.4 |
| Geography | 4,275 | HSC | 37.1 | 6.6 | 49.0 | 47.5 | 44.5 | 42.0 | 38.5 | 33.0 |
|  |  | scaled | 25.3 | 11.1 | 50.0 | 46.3 | 39.7 | 34.0 | 26.2 | 17.0 |
| Industrial Technology | 5,512 | HSC | 35.3 | 6.9 | 49.5 | 48.0 | 44.0 | 40.0 | 35.5 | 30.5 |
|  |  | scaled | 17.0 | 9.6 | 40.5 | 38.0 | 30.9 | 24.2 | 15.9 | 9.0 |
| Information Processes and Technology | 2,814 | HSC | 36.4 | 6.5 | 49.0 | 47.0 | 44.0 | 41.0 | 37.5 | 33.0 |
|  |  | scaled | 21.5 | 10.8 | 47.8 | 43.7 | 36.2 | 29.7 | 21.2 | 13.2 |
| Legal Studies | 10,297 |  | 37.5 | 6.1 | 49.5 | 47.5 | 45.0 | 42.0 | 38.0 | 33.5 |
|  |  | scaled | 25.3 | 10.7 | 50.0 | 45.6 | 39.1 | 33.7 | 25.9 | 17.2 |
| Mathematics General 2 | 31,511 | HSC | 34.5 | 7.1 | 50.0 | 47.5 | 43.5 | 40.0 | 35.0 | 29.5 |
|  |  | scaled | 21.7 | 10.2 | 45.9 | 42.1 | 36.0 | 29.8 | 21.2 | 13.2 |
| Mathematics | 16,450 | HSC | 39.2 | 6.7 | 50.0 | 49.0 | 46.5 | 44.0 | 40.0 | 36.5 |
|  |  | scaled | 31.2 | 9.9 | 50.0 | 47.6 | 42.9 | 38.6 | 32.8 | 25.5 |
| Mathematics Extension 1 | 8,954 | HSC | 40.9 | 6.5 | 50.0 | 49.5 | 48.0 | 46.0 | 42.0 | 37.0 |
|  |  | scaled | 39.1 | 6.8 | 50.0 | 49.3 | 46.7 | 44.2 | 40.3 | 35.2 |
| Mathematics Extension 2 | 3,333 |  | 41.4 | 6.0 | 50.0 | 49.0 | 47.5 | 46.0 | 43.0 | 38.5 |
|  |  | scaled | 42.9 | 4.6 | 50.0 | 49.0 | 47.4 | 46.0 | 44.0 | 41.0 |
| Modern History | 11,053 |  | 37.9 | 6.3 | 49.5 | 47.5 | 45.0 | 42.5 | 39.0 |  |
|  |  | scaled | 26.4 | 10.9 | 50.0 | 45.5 | 39.9 | 35.0 | 27.9 | 18.5 |
| History Extension | 1,878 | HSC | 39.0 | 6.2 | 50.0 | 49.0 | 46.0 | 44.0 | 40.0 | 35.0 |
|  |  | scaled | 34.2 | 6.6 | 49.3 | 46.3 | 42.3 | 39.1 | 34.5 | 30.3 |
| Music 1 | 4,710 | HSC | 40.5 | 4.5 | 49.5 | 48.5 | 46.0 | 44.0 | 41.0 | 38.0 |
|  |  |  | 21.1 | 10.5 | 46.6 | 43.5 | 35.7 | 28.8 | 20.9 | 12.8 |
| Music 2 | 694 | HSC | 43.5 | 2.9 | 49.5 | 49.0 | 47.0 | 45.5 | 44.0 | 42.0 |
|  |  | scaled | 34.0 | 8.0 | 50.0 | 48.7 | 43.9 | 40.2 | 35.0 | 29.0 |
| Music Extension | 424 |  | 44.0 | 5.4 | 50.0 | 50.0 | 50.0 | 48.0 | 45.0 | 41.0 |
|  |  | scaled | 36.2 | 8.8 | 50.0 | 50.0 | 48.6 | 42.9 | 36.3 | 30.1 |
| PDHPE | 15,082 | HSC | 36.8 | 5.5 | 49.5 | 47.5 | 44.5 | 40.5 | 36.5 | 33.0 |
|  |  |  | 22.9 | 10.4 | 48.4 | 44.4 | 37.4 | 30.9 | 22.5 | 14.8 |
| Physics | 9,510 | HSC | 36.5 | 6.3 | 49.0 | 47.5 | 44.0 | 40.5 | 37.0 | 33.5 |
|  |  |  | 30.4 | 9.8 | 50.0 | 47.0 | 42.3 | 38.1 | 31.7 | 23.5 |
| Senior Science | 6,320 | HSC | 35.9 | 6.7 | 49.0 | 47.5 | 44.0 | 40.5 | 36.5 | 32.0 |
|  |  | scaled | 18.7 | 10.1 | 43.4 | 41.0 | 33.3 | 26.3 | 17.7 | 10.6 |
| Society and Culture | 4,566 |  | 38.9 | 5.4 | 49.5 | 48.0 | 45.0 | 42.5 | 39.5 | 36.0 |
|  |  | scaled | 23.8 | 10.6 | 49.0 | 45.8 | 38.6 | 31.7 | 23.4 | 15.7 |
| Software Design and Development | 1,783 | HSC | 36.9 | 5.8 | 50.0 | 48.0 | 44.0 | 41.0 | 37.5 | 33.0 |
|  |  |  | 23.6 | 10.7 | 48.0 | 44.1 | 38.0 | 31.9 | 23.8 | 15.1 |
| Studies of Religion I | 8,951 | HSC | 38.8 | 5.2 | 50.0 | 48.0 | 45.0 | 43.0 | 40.0 | 35.0 |
|  |  | scaled | 27.8 | 8.6 | 48.7 | 44.3 | 38.9 | 34.3 | 28.3 | 21.7 |
| Studies of Religion II | 5,902 | HSC | 37.3 | 6.1 | 48.5 | 47.0 | 44.0 | 41.5 | 38.5 | 34.0 |
|  |  | scaled | 26.6 | 10.3 | 50.0 | 45.9 | 39.6 | 34.3 | 27.5 | 19.2 |
| Textiles and Design | 1,635 | HSC | 39.0 | 5.5 | 49.0 | 48.5 | 45.5 | 43.0 | 39.5 | 35.5 |
|  |  |  | 22.9 | 11.0 | 48.9 | 47.0 | 38.7 | 30.9 | 22.1 | 14.4 |

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

| Course | Number | Type of mark | Mean | SD | Max. mark | P99 | P90 | P75 | P50 | P25 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Visual Arts | 9,003 |  | $\begin{aligned} & 39.9 \\ & 22.2 \end{aligned}$ | $\begin{array}{r} 4.4 \\ 11.1 \end{array}$ | $\begin{aligned} & 50.0 \\ & 49.3 \end{aligned}$ | $\begin{aligned} & 48.0 \\ & 45.4 \end{aligned}$ | $\begin{aligned} & 45.0 \\ & 37.6 \end{aligned}$ | $\begin{aligned} & 43.0 \\ & 30.9 \end{aligned}$ | $\begin{aligned} & 40.0 \\ & 21.9 \end{aligned}$ | $\begin{aligned} & 37.0 \\ & 13.0 \end{aligned}$ |
| Arabic Continuers | 182 | HSC <br> scaled | $\begin{aligned} & 39.3 \\ & 18.2 \end{aligned}$ | $\begin{array}{r} 5.4 \\ 11.3 \end{array}$ | $\begin{aligned} & 47.0 \\ & 44.8 \end{aligned}$ | $\begin{aligned} & 46.5 \\ & 43.3 \end{aligned}$ | $\begin{aligned} & 45.0 \\ & 35.3 \end{aligned}$ | $\begin{aligned} & 42.5 \\ & 25.4 \end{aligned}$ | $\begin{aligned} & 40.5 \\ & 17.2 \end{aligned}$ | $\begin{array}{r} 37.0 \\ 8.6 \end{array}$ |
| Arabic Extension | 53 | $\begin{array}{r} \text { HSC } \\ \text { scaled } \end{array}$ | $\begin{aligned} & 38.8 \\ & 23.9 \end{aligned}$ | $\begin{aligned} & 5.2 \\ & 6.6 \end{aligned}$ | $\begin{aligned} & 47.0 \\ & 38.8 \end{aligned}$ | $\begin{aligned} & 47.0 \\ & 38.8 \end{aligned}$ | $\begin{aligned} & 46.0 \\ & 32.6 \end{aligned}$ | $\begin{aligned} & 44.0 \\ & 29.0 \end{aligned}$ | $\begin{aligned} & 38.0 \\ & 22.9 \end{aligned}$ | $\begin{aligned} & 35.0 \\ & 18.8 \end{aligned}$ |
| Armenian | 18 | HSC <br> scaled | $\begin{aligned} & 41.1 \\ & 29.7 \end{aligned}$ | $\begin{array}{r} 3.8 \\ 10.5 \end{array}$ | $\begin{aligned} & 47.0 \\ & 50.0 \end{aligned}$ |  |  |  |  |  |
| Chinese Beginners | 27 | HSC <br> scaled | $\begin{aligned} & 40.9 \\ & 26.4 \end{aligned}$ | $\begin{array}{r} 6.1 \\ 10.6 \end{array}$ | $\begin{aligned} & 49.5 \\ & 47.6 \end{aligned}$ |  |  |  |  |  |
| Chinese Continuers | 102 |  | $\begin{aligned} & 42.6 \\ & 33.3 \end{aligned}$ | $\begin{aligned} & 5.5 \\ & 9.8 \end{aligned}$ | $\begin{aligned} & 49.0 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 48.5 \\ & 48.8 \end{aligned}$ | $\begin{aligned} & 47.5 \\ & 43.8 \end{aligned}$ | $\begin{aligned} & 47.0 \\ & 41.1 \end{aligned}$ | $\begin{aligned} & 45.0 \\ & 35.4 \end{aligned}$ | $\begin{aligned} & 37.5 \\ & 24.3 \end{aligned}$ |
| Chinese Extension | 24 |  | $\begin{aligned} & 46.1 \\ & 38.3 \end{aligned}$ | $\begin{aligned} & 2.5 \\ & 6.1 \end{aligned}$ | $\begin{aligned} & 49.0 \\ & 50.0 \end{aligned}$ |  |  |  |  |  |
| Chinese Background Speakers | 660 | HSC <br> scaled | $\begin{aligned} & 41.0 \\ & 23.0 \end{aligned}$ | $\begin{array}{r} 3.6 \\ 10.7 \end{array}$ | $\begin{aligned} & 47.5 \\ & 49.0 \end{aligned}$ | $\begin{aligned} & 46.5 \\ & 46.2 \end{aligned}$ | $\begin{aligned} & 45.0 \\ & 37.7 \end{aligned}$ | $\begin{aligned} & 43.5 \\ & 30.9 \end{aligned}$ | $\begin{aligned} & 41.0 \\ & 22.1 \end{aligned}$ | $\begin{aligned} & 39.0 \\ & 15.3 \end{aligned}$ |
| Heritage Chinese (Mandarin) | 127 |  | $\begin{aligned} & 42.4 \\ & 32.3 \end{aligned}$ | $\begin{aligned} & 3.3 \\ & 8.4 \end{aligned}$ | $\begin{aligned} & 48.5 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 48.0 \\ & 47.6 \end{aligned}$ | $\begin{aligned} & 46.5 \\ & 43.8 \end{aligned}$ | $\begin{aligned} & 45.0 \\ & 38.6 \end{aligned}$ | $\begin{aligned} & 42.5 \\ & 32.2 \end{aligned}$ | $\begin{aligned} & 40.5 \\ & 26.2 \end{aligned}$ |
| Classical Greek Continuers | 14 |  | $\begin{aligned} & 45.0 \\ & 41.1 \end{aligned}$ | $\begin{aligned} & 3.5 \\ & 7.9 \end{aligned}$ | $\begin{aligned} & 49.0 \\ & 50.0 \end{aligned}$ |  |  |  |  |  |
| Classical Hebrew Continueıs | 31 | HSC <br> scaled | $\begin{aligned} & 42.3 \\ & 35.6 \end{aligned}$ | $\begin{aligned} & 5.1 \\ & 8.1 \end{aligned}$ | $\begin{aligned} & 49.5 \\ & 50.0 \end{aligned}$ |  |  |  |  |  |
| Classical Hebrew Extension | 22 | $\begin{array}{r} \text { HSC } \\ \text { scaled } \end{array}$ | $\begin{aligned} & 44.9 \\ & 38.6 \end{aligned}$ | $\begin{aligned} & 2.7 \\ & 4.8 \end{aligned}$ | $\begin{aligned} & 49.0 \\ & 50.0 \end{aligned}$ |  |  |  |  |  |
| Filipino | 10 |  | 47.4 <br> 24.1 | $\begin{array}{r} 1.6 \\ 11.1 \end{array}$ | $\begin{aligned} & 49.5 \\ & 46.6 \end{aligned}$ |  |  |  |  |  |
| French Beginners | 647 |  | $\begin{aligned} & 38.0 \\ & 24.0 \end{aligned}$ | $\begin{array}{r} 7.7 \\ 11.5 \end{array}$ | $\begin{aligned} & 50.0 \\ & 49.7 \end{aligned}$ | $\begin{aligned} & 49.0 \\ & 46.5 \end{aligned}$ | $\begin{aligned} & 47.0 \\ & 39.6 \end{aligned}$ | $\begin{aligned} & 44.0 \\ & 33.2 \end{aligned}$ | $\begin{aligned} & 39.0 \\ & 23.7 \end{aligned}$ | $\begin{aligned} & 33.5 \\ & 14.8 \end{aligned}$ |
| French Continuers | 727 | HSC <br> scaled | $\begin{aligned} & 41.3 \\ & 35.1 \end{aligned}$ | $\begin{aligned} & 5.2 \\ & 8.6 \end{aligned}$ | $\begin{aligned} & 49.5 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 48.5 \\ & 48.3 \end{aligned}$ | $\begin{aligned} & 47.5 \\ & 45.2 \end{aligned}$ | $\begin{aligned} & 45.5 \\ & 42.0 \end{aligned}$ | $\begin{aligned} & 42.0 \\ & 36.3 \end{aligned}$ | $\begin{aligned} & 38.0 \\ & 29.6 \end{aligned}$ |
| French Extension | 166 |  | $\begin{aligned} & 41.8 \\ & 41.0 \end{aligned}$ | $\begin{aligned} & 5.2 \\ & 5.0 \end{aligned}$ | $\begin{aligned} & 50.0 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 49.0 \\ & 49.9 \end{aligned}$ | $\begin{aligned} & 47.0 \\ & 47.0 \end{aligned}$ | $\begin{aligned} & 46.0 \\ & 44.4 \end{aligned}$ | $\begin{aligned} & 43.0 \\ & 41.5 \end{aligned}$ | $\begin{aligned} & 38.0 \\ & 37.6 \end{aligned}$ |
| German Beginners | 111 | $\begin{array}{r} \text { HSC } \\ \text { scaled } \end{array}$ | $\begin{aligned} & 40.2 \\ & 29.1 \end{aligned}$ | $\begin{array}{r} 6.7 \\ 10.4 \end{array}$ | $\begin{aligned} & 49.5 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 49.5 \\ & 50.0 \end{aligned}$ | $47.5$ $42.4$ | $\begin{aligned} & 46.0 \\ & 37.6 \end{aligned}$ | $\begin{aligned} & 40.0 \\ & 28.3 \end{aligned}$ | $\begin{aligned} & 36.5 \\ & 21.9 \end{aligned}$ |
| German Continuers | 238 |  | $\begin{aligned} & 40.3 \\ & 33.9 \end{aligned}$ | $\begin{aligned} & 5.4 \\ & 9.3 \end{aligned}$ | $\begin{aligned} & 49.0 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 48.5 \\ & 49.2 \end{aligned}$ | $47.0$ $45.1$ | $\begin{aligned} & 44.5 \\ & 40.5 \end{aligned}$ | $\begin{aligned} & 41.0 \\ & 35.8 \end{aligned}$ | $\begin{aligned} & 37.0 \\ & 28.5 \end{aligned}$ |
| German Extension | 68 | $\begin{array}{r} \text { HSC } \\ \text { scaled } \end{array}$ | $\begin{aligned} & 41.7 \\ & 38.2 \end{aligned}$ | $\begin{aligned} & 5.7 \\ & 6.7 \end{aligned}$ | $\begin{aligned} & 48.0 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 48.0 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 48.0 \\ & 46.9 \end{aligned}$ | $\begin{aligned} & 45.0 \\ & 42.6 \end{aligned}$ | $\begin{aligned} & 42.0 \\ & 37.3 \end{aligned}$ | $\begin{aligned} & 39.0 \\ & 34.4 \end{aligned}$ |
| Hindi | 26 |  | $\begin{aligned} & 43.5 \\ & 30.9 \end{aligned}$ | $\begin{array}{r} 4.5 \\ 13.0 \end{array}$ | $\begin{aligned} & 47.0 \\ & 50.0 \end{aligned}$ |  |  |  |  |  |
| Indonesian Beginners | 39 | $\begin{array}{r} \text { HSC } \\ \text { scaled } \end{array}$ | $\begin{aligned} & 38.7 \\ & 26.0 \end{aligned}$ | $\begin{aligned} & 5.5 \\ & 9.3 \end{aligned}$ | $\begin{aligned} & 49.0 \\ & 47.2 \end{aligned}$ |  |  |  |  |  |
| Indonesian Continuers | 63 |  | $\begin{aligned} & 40.4 \\ & 31.0 \end{aligned}$ | $\begin{aligned} & 5.9 \\ & 9.9 \end{aligned}$ | $\begin{aligned} & 49.0 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 49.0 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 47.5 \\ & 44.1 \end{aligned}$ | $\begin{aligned} & 45.0 \\ & 38.2 \end{aligned}$ | $\begin{aligned} & 41.0 \\ & 30.3 \end{aligned}$ | $\begin{aligned} & 36.0 \\ & 24.0 \end{aligned}$ |

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

| Course | Number | Type of mark | Mean | SD | Max. mark | P99 | P90 | P75 | P50 | P25 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Indonesian Extension | 16 | $\begin{array}{r} \text { HSC } \\ \text { scaled } \end{array}$ | $\begin{aligned} & 40.6 \\ & 36.5 \end{aligned}$ | $\begin{aligned} & 4.8 \\ & 6.3 \end{aligned}$ | $\begin{aligned} & 47.0 \\ & 50.0 \end{aligned}$ |  |  |  |  |  |
| Indonesian Background Speakers | 72 | $\begin{array}{r} \text { HSC } \\ \text { scaled } \end{array}$ | $\begin{aligned} & 37.7 \\ & 32.9 \end{aligned}$ | $\begin{aligned} & 2.1 \\ & 6.8 \end{aligned}$ | $\begin{aligned} & 41.0 \\ & 46.5 \end{aligned}$ | $\begin{aligned} & 41.0 \\ & 46.5 \end{aligned}$ | $\begin{aligned} & 40.0 \\ & 40.6 \end{aligned}$ | $\begin{aligned} & 39.5 \\ & 38.2 \end{aligned}$ | $\begin{aligned} & 38.0 \\ & 33.3 \end{aligned}$ | $\begin{aligned} & 36.5 \\ & 28.6 \end{aligned}$ |
| Italian Beginners | 361 |  | $\begin{aligned} & 36.5 \\ & 26.5 \end{aligned}$ | $\begin{array}{r} 8.4 \\ 12.3 \end{array}$ | $\begin{aligned} & 49.0 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 48.5 \\ & 49.4 \end{aligned}$ | $\begin{aligned} & 46.5 \\ & 42.9 \end{aligned}$ | $\begin{aligned} & 43.0 \\ & 36.3 \end{aligned}$ | $\begin{aligned} & 37.5 \\ & 26.9 \end{aligned}$ | $\begin{aligned} & 31.5 \\ & 16.9 \end{aligned}$ |
| Italian Continuers | 272 |  | $\begin{aligned} & 39.5 \\ & 31.2 \end{aligned}$ | $\begin{aligned} & 6.0 \\ & 9.0 \end{aligned}$ | $\begin{aligned} & 49.0 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 48.5 \\ & 48.2 \end{aligned}$ | $\begin{aligned} & 46.5 \\ & 42.9 \end{aligned}$ | $\begin{aligned} & 44.0 \\ & 37.3 \end{aligned}$ | $\begin{aligned} & 40.5 \\ & 31.7 \end{aligned}$ | $\begin{aligned} & 35.0 \\ & 24.7 \end{aligned}$ |
| Italian Extension | 57 |  | $\begin{aligned} & 42.4 \\ & 36.7 \end{aligned}$ | $\begin{aligned} & 5.3 \\ & 7.8 \end{aligned}$ | $\begin{aligned} & 49.0 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 49.0 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 48.0 \\ & 45.9 \end{aligned}$ | $\begin{aligned} & 46.0 \\ & 42.3 \end{aligned}$ | $\begin{aligned} & 44.0 \\ & 37.7 \end{aligned}$ | $\begin{aligned} & 41.0 \\ & 33.2 \end{aligned}$ |
| Japanese Beginners | 642 |  | $36.2$ $23.7$ | $\begin{array}{r} 8.1 \\ 11.3 \end{array}$ | $\begin{aligned} & 49.5 \\ & 48.2 \end{aligned}$ | $\begin{aligned} & 48.5 \\ & 45.3 \end{aligned}$ | $\begin{aligned} & 45.5 \\ & 37.9 \end{aligned}$ | $\begin{aligned} & 42.5 \\ & 32.9 \end{aligned}$ | $\begin{aligned} & 37.0 \\ & 24.1 \end{aligned}$ | $\begin{aligned} & 31.5 \\ & 15.3 \end{aligned}$ |
| J apanese Continuers | 659 | HSC <br> scaled | $\begin{aligned} & 39.7 \\ & 31.2 \end{aligned}$ | $\begin{aligned} & 5.7 \\ & 9.5 \end{aligned}$ | $\begin{aligned} & 50.0 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 49.0 \\ & 47.7 \end{aligned}$ | $\begin{aligned} & 46.5 \\ & 42.9 \end{aligned}$ | $\begin{array}{r} 44.0 \\ 39.0 \end{array}$ | $\begin{aligned} & 40.5 \\ & 32.0 \end{aligned}$ | $\begin{aligned} & 35.5 \\ & 24.4 \end{aligned}$ |
| Japanese Extension | 208 |  | $41.1$ $37.0$ | $\begin{aligned} & 5.3 \\ & 5.8 \end{aligned}$ | $\begin{aligned} & 49.0 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 48.0 \\ & 48.3 \end{aligned}$ | $\begin{aligned} & 47.0 \\ & 44.7 \end{aligned}$ | $\begin{aligned} & 46.0 \\ & 41.8 \end{aligned}$ | $\begin{aligned} & 42.0 \\ & 37.0 \end{aligned}$ | $\begin{aligned} & 38.0 \\ & 32.8 \end{aligned}$ |
| Japanese Background Speakers | 19 | $\begin{array}{r} \text { HSC } \\ \text { scaled } \end{array}$ | $\begin{aligned} & 40.4 \\ & 20.5 \end{aligned}$ | $\begin{array}{r} 3.8 \\ 1.0 .7 \end{array}$ | $\begin{aligned} & 47.0 \\ & 44.5 \end{aligned}$ |  |  |  |  |  |
| Heritage J apanese | 20 |  | $\begin{aligned} & 42.0 \\ & 27.5 \end{aligned}$ | $\begin{aligned} & 3.6 \\ & 9.8 \end{aligned}$ | $\begin{aligned} & 46.5 \\ & 47.5 \end{aligned}$ |  |  |  |  |  |
| Korean Continuers | 17 | HSC <br> scaled | $\begin{aligned} & 45.4 \\ & 25.3 \end{aligned}$ | $\begin{array}{r} 3.9 \\ 13.9 \end{array}$ | $\begin{aligned} & 49.5 \\ & 50.0 \end{aligned}$ | - |  |  |  |  |
| Korean Background Speakers | 54 | HSC <br> scaled | $\begin{aligned} & 40.6 \\ & 24.2 \end{aligned}$ | $\begin{array}{r} 4.6 \\ 11.8 \end{array}$ | $\begin{aligned} & 49.0 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 49.0 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 46.0 \\ & 39.9 \end{aligned}$ | $\begin{aligned} & 43.5 \\ & 30.4 \end{aligned}$ | $\begin{aligned} & 41.5 \\ & 24.9 \end{aligned}$ | $\begin{aligned} & 38.0 \\ & 15.3 \end{aligned}$ |
| Heritage Korean | 64 |  | $\begin{aligned} & 44.3 \\ & 27.4 \end{aligned}$ | $\begin{array}{r} 3.6 \\ 11.2 \end{array}$ | $\begin{aligned} & 49.0 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 49.0 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 47.5 \\ & 39.6 \end{aligned}$ | $\begin{aligned} & 46.5 \\ & 34.7 \end{aligned}$ | $\begin{aligned} & 45.5 \\ & 30.0 \end{aligned}$ | $\begin{aligned} & 42.0 \\ & 17.4 \end{aligned}$ |
| Latin Continuers | 194 |  | $\begin{aligned} & 43.7 \\ & 40.1 \end{aligned}$ | $\begin{aligned} & 4.6 \\ & 8.0 \end{aligned}$ | $\begin{aligned} & 49.5 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 49.5 \\ & 50.0 \end{aligned}$ | 48.0 <br> 47.9 | $\begin{aligned} & 47.0 \\ & 45.9 \end{aligned}$ | $\begin{aligned} & 45.0 \\ & 41.8 \end{aligned}$ | $\begin{aligned} & 41.0 \\ & 36.4 \end{aligned}$ |
| Latin Extension | 129 | $\begin{array}{r} \text { HSC } \\ \text { scaled } \end{array}$ | $\begin{aligned} & 45.6 \\ & 42.5 \end{aligned}$ | $\begin{aligned} & 3.8 \\ & 6.0 \end{aligned}$ | $\begin{aligned} & 50.0 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 50.0 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 49.0 \\ & 48.7 \end{aligned}$ | $\begin{aligned} & 48.0 \\ & 46.4 \end{aligned}$ | $\begin{aligned} & 47.0 \\ & 44.2 \end{aligned}$ | $\begin{aligned} & 45.0 \\ & 40.9 \end{aligned}$ |
| Macedonian | 17 | HSC <br> scaled | $\begin{aligned} & 43.5 \\ & 30.7 \end{aligned}$ | $\begin{array}{r} 3.2 \\ 11.7 \end{array}$ | $\begin{aligned} & 47.5 \\ & 50.0 \end{aligned}$ |  |  |  |  |  |
| Modern Greek Beginners | 69 | HSC <br> scaled | $\begin{aligned} & 41.7 \\ & 27.1 \end{aligned}$ | $\begin{array}{r} 5.9 \\ 10.6 \end{array}$ | $\begin{aligned} & 49.5 \\ & 46.5 \end{aligned}$ | $\begin{aligned} & 49.5 \\ & 46.5 \end{aligned}$ | $\begin{aligned} & 48.5 \\ & 41.2 \end{aligned}$ | $\begin{aligned} & 46.0 \\ & 34.1 \end{aligned}$ | $\begin{aligned} & 42.5 \\ & 27.8 \end{aligned}$ | $\begin{aligned} & 39.0 \\ & 21.4 \end{aligned}$ |
| Modern Greek Continuers | 95 | HSC <br> scaled | $\begin{aligned} & 41.7 \\ & 25.2 \end{aligned}$ | $\begin{array}{r} 4.1 \\ 10.9 \end{array}$ | $\begin{aligned} & 48.5 \\ & 48.9 \end{aligned}$ | $\begin{aligned} & 48.5 \\ & 48.9 \end{aligned}$ | $\begin{aligned} & 47.0 \\ & 41.4 \end{aligned}$ | $\begin{aligned} & 45.0 \\ & 32.9 \end{aligned}$ | $\begin{aligned} & 42.0 \\ & 23.9 \end{aligned}$ | $\begin{aligned} & 39.0 \\ & 17.0 \end{aligned}$ |
| Modern Greek Extension | 43 | HSC <br> scaled | $\begin{aligned} & 43.7 \\ & 31.5 \end{aligned}$ | $\begin{aligned} & 4.2 \\ & 8.7 \end{aligned}$ | $\begin{aligned} & 50.0 \\ & 49.5 \end{aligned}$ | $\begin{aligned} & 50.0 \\ & 49.5 \end{aligned}$ | $\begin{aligned} & 49.0 \\ & 42.8 \end{aligned}$ | $\begin{aligned} & 47.0 \\ & 38.9 \end{aligned}$ | $\begin{aligned} & 45.0 \\ & 31.6 \end{aligned}$ | $\begin{aligned} & 39.0 \\ & 22.8 \end{aligned}$ |
| Modern Hebrew | 39 | HSC <br> scaled | $\begin{aligned} & 44.5 \\ & 33.7 \end{aligned}$ | $\begin{aligned} & 2.8 \\ & 8.5 \end{aligned}$ | $\begin{aligned} & 49.0 \\ & 50.0 \end{aligned}$ |  |  |  |  |  |
| Persian | 31 | $\begin{array}{r} \text { HSC } \\ \text { scaled } \end{array}$ | $\begin{aligned} & 39.0 \\ & 16.9 \end{aligned}$ | $\begin{array}{r} 4.5 \\ 10.7 \end{array}$ | $\begin{aligned} & 49.0 \\ & 43.3 \end{aligned}$ |  |  |  |  |  |
| Polish | 17 | $\begin{array}{r} \text { HSC } \\ \text { scaled } \end{array}$ | $\begin{aligned} & 45.2 \\ & 28.6 \end{aligned}$ | $\begin{array}{r} 4.6 \\ 13.7 \end{array}$ | $\begin{aligned} & 49.5 \\ & 50.0 \end{aligned}$ |  |  |  |  |  |

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

| Course | Number | Type of mark | Mean | SD | Max. mark | P99 | P90 | P75 | P50 | P25 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Portuguese | 12 |  | $\begin{aligned} & 41.7 \\ & 24.0 \end{aligned}$ | $\begin{aligned} & 4.5 \\ & 9.9 \end{aligned}$ | $\begin{aligned} & 48.0 \\ & 44.4 \end{aligned}$ |  |  |  |  |  |
| Russian | 25 |  | $\begin{aligned} & 44.3 \\ & 29.7 \end{aligned}$ | $\begin{array}{r} 3.3 \\ 10.0 \end{array}$ | $\begin{aligned} & 49.0 \\ & 49.0 \end{aligned}$ |  |  |  |  |  |
| Serbian | 17 |  | $\begin{aligned} & 44.3 \\ & 28.8 \end{aligned}$ | $\begin{array}{r} 2.4 \\ 11.8 \end{array}$ | $\begin{aligned} & 48.0 \\ & 50.0 \end{aligned}$ |  |  |  |  |  |
| Spanish Beginners | 177 | HSC <br> scaled | $\begin{aligned} & 38.5 \\ & 26.0 \end{aligned}$ | $\begin{array}{r} 4.9 \\ 11.1 \end{array}$ | $\begin{aligned} & 48.5 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 48.5 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 45.0 \\ & 41.7 \end{aligned}$ | $\begin{aligned} & 42.0 \\ & 33.4 \end{aligned}$ | $\begin{aligned} & 38.5 \\ & 25.1 \end{aligned}$ | $\begin{aligned} & 35.0 \\ & 17.7 \end{aligned}$ |
| Spanish Continuers | 150 | HSC <br> scaled | $\begin{aligned} & 38.3 \\ & 24.9 \end{aligned}$ | $\begin{array}{r} 4.8 \\ 11.2 \end{array}$ | $\begin{aligned} & 47.0 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 46.5 \\ & 48.6 \end{aligned}$ | $\begin{aligned} & 44.5 \\ & 40.4 \end{aligned}$ | $\begin{aligned} & 41.5 \\ & 32.0 \end{aligned}$ | $\begin{aligned} & 39.0 \\ & 25.1 \end{aligned}$ | $\begin{aligned} & 34.5 \\ & 15.1 \end{aligned}$ |
| Spanish Extension | 46 | HSC <br> scaled | $\begin{aligned} & 40.4 \\ & 32.4 \end{aligned}$ | $\begin{aligned} & 3.7 \\ & 6.9 \end{aligned}$ | 47.0 <br> 47.7 | $\begin{aligned} & 47.0 \\ & 47.7 \end{aligned}$ | $\begin{aligned} & 45.0 \\ & 41.0 \end{aligned}$ | $\begin{aligned} & 43.0 \\ & 37.0 \end{aligned}$ | $\begin{aligned} & 41.0 \\ & 32.1 \end{aligned}$ | $\begin{aligned} & 38.0 \\ & 28.4 \end{aligned}$ |
| Turkish | 41 | HSC <br> scaled | $\begin{aligned} & 42.0 \\ & 24.6 \end{aligned}$ | $\begin{array}{r} 4.6 \\ 12.9 \end{array}$ | $\begin{aligned} & 47.5 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 47.5 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 46.5 \\ & 41.6 \end{aligned}$ | $\begin{aligned} & 45.5 \\ & 34.0 \end{aligned}$ | $\begin{aligned} & 43.5 \\ & 25.2 \end{aligned}$ | $\begin{aligned} & 39.5 \\ & 13.2 \end{aligned}$ |
| Vietnamese | 145 | $\begin{array}{r} \text { HSC } \\ \text { scaled } \end{array}$ | $\begin{aligned} & 39.1 \\ & 20.6 \end{aligned}$ | $\begin{array}{r} 3.7 \\ 11.2 \end{array}$ | $\begin{aligned} & 49.5 \\ & 48.3 \end{aligned}$ | $\begin{aligned} & 46.5 \\ & 44.9 \end{aligned}$ | $\begin{aligned} & 43.5 \\ & 36.3 \end{aligned}$ | $\begin{aligned} & 41.0 \\ & 27.5 \end{aligned}$ | $\begin{aligned} & 39.5 \\ & 19.9 \end{aligned}$ | $\begin{aligned} & 37.0 \\ & 11.5 \end{aligned}$ |
| Automotive Exam | 463 | HSC <br> scaled | $\begin{aligned} & 33.8 \\ & 12.4 \end{aligned}$ | $\begin{aligned} & 5.0 \\ & 9.1 \end{aligned}$ | $\begin{aligned} & 45.5 \\ & 35.0 \end{aligned}$ | $\begin{aligned} & 45.0 \\ & 34.7 \end{aligned}$ | $\begin{aligned} & 40.5 \\ & 27.2 \end{aligned}$ | $\begin{aligned} & 37.0 \\ & 17.9 \end{aligned}$ | $\begin{aligned} & 33.5 \\ & 10.3 \end{aligned}$ | $\begin{array}{r} 30.5 \\ 5.1 \end{array}$ |
| Business Services Exam | 1,140 | HSC <br> scaled | 36.5 <br> 18.1 | $\begin{array}{r} 5.3 \\ 10.2 \end{array}$ | 48.5 <br> 43.1 | $\begin{aligned} & 46.5 \\ & 40.2 \end{aligned}$ | $\begin{aligned} & 43.0 \\ & 33.0 \end{aligned}$ | $\begin{aligned} & 40.5 \\ & 25.8 \end{aligned}$ | $\begin{aligned} & 36.5 \\ & 17.0 \end{aligned}$ | $\begin{array}{r} 33.0 \\ 9.5 \end{array}$ |
| Construction Exam | 1,637 | HSC <br> scaled | $\begin{aligned} & 35.9 \\ & 15.3 \end{aligned}$ | $\begin{aligned} & 4.8 \\ & 9.6 \end{aligned}$ | $\begin{aligned} & 48.5 \\ & 39.1 \end{aligned}$ | $\begin{aligned} & 45.0 \\ & 36.7 \end{aligned}$ | $\begin{aligned} & 41.5 \\ & 30.0 \end{aligned}$ | $\begin{aligned} & 39.0 \\ & 22.6 \end{aligned}$ | $\begin{aligned} & 36.5 \\ & 14.1 \end{aligned}$ | $\begin{array}{r} 33.0 \\ 7.2 \end{array}$ |
| Electrotechnology Exam | 283 |  | $\begin{aligned} & 34.4 \\ & 17.0 \end{aligned}$ | $\begin{aligned} & 4.7 \\ & 8.4 \end{aligned}$ | $\begin{aligned} & 46.5 \\ & 37.6 \end{aligned}$ | $\begin{aligned} & 43.0 \\ & 34.0 \end{aligned}$ | $\begin{aligned} & 40.0 \\ & 29.1 \end{aligned}$ | $\begin{aligned} & 37.5 \\ & 22.6 \end{aligned}$ | $\begin{aligned} & 35.0 \\ & 17.1 \end{aligned}$ | $\begin{aligned} & 31.5 \\ & 10.1 \end{aligned}$ |
| Entertainment Industry Exam | 918 |  | $\begin{aligned} & 36.3 \\ & 21.2 \end{aligned}$ | $\begin{aligned} & 4.3 \\ & 9.4 \end{aligned}$ | $\begin{aligned} & 48.5 \\ & 44.4 \end{aligned}$ | $\begin{aligned} & 45.0 \\ & 40.5 \end{aligned}$ | $\begin{aligned} & 41.5 \\ & 33.5 \end{aligned}$ | $\begin{aligned} & 39.5 \\ & 28.4 \end{aligned}$ | $\begin{aligned} & 36.0 \\ & 21.2 \end{aligned}$ | $\begin{aligned} & 33.5 \\ & 14.0 \end{aligned}$ |
| Financial Services Exam | 152 |  | $\begin{aligned} & 36.9 \\ & 26.2 \end{aligned}$ | $\begin{array}{r} 6.6 \\ 10.7 \end{array}$ | $\begin{aligned} & 49.0 \\ & 50.0 \end{aligned}$ | $\begin{aligned} & 48.5 \\ & 49.0 \end{aligned}$ | $\begin{aligned} & 44.5 \\ & 42.3 \end{aligned}$ | $\begin{aligned} & 41.0 \\ & 33.7 \end{aligned}$ | $\begin{aligned} & 37.0 \\ & 24.9 \end{aligned}$ | $\begin{aligned} & 34.0 \\ & 18.9 \end{aligned}$ |
| Hospitality Exam | 5,180 | HSC <br> scaled | $\begin{aligned} & 37.6 \\ & 18.9 \end{aligned}$ | $\begin{array}{r} 4.6 \\ 10.1 \end{array}$ | $\begin{aligned} & 48.0 \\ & 43.9 \end{aligned}$ | $\begin{aligned} & 46.0 \\ & 41.1 \end{aligned}$ | $\begin{aligned} & 43.0 \\ & 33.0 \end{aligned}$ | $\begin{aligned} & 41.0 \\ & 26.3 \end{aligned}$ | $\begin{aligned} & 38.0 \\ & 18.8 \end{aligned}$ | $\begin{aligned} & 34.5 \\ & 10.4 \end{aligned}$ |
| Human Services Exam | 585 | $\begin{array}{r} \text { HSC } \\ \text { scaled } \end{array}$ | $\begin{aligned} & 35.8 \\ & 18.1 \end{aligned}$ | $\begin{aligned} & 4.5 \\ & 8.9 \end{aligned}$ | $\begin{aligned} & 48.5 \\ & 39.9 \end{aligned}$ | $\begin{aligned} & 46.0 \\ & 38.4 \end{aligned}$ | $\begin{aligned} & 42.0 \\ & 32.0 \end{aligned}$ | $\begin{aligned} & 38.5 \\ & 24.0 \end{aligned}$ | $\begin{aligned} & 36.0 \\ & 17.1 \end{aligned}$ | $\begin{aligned} & 33.0 \\ & 11.3 \end{aligned}$ |
| Information and Digital Technology Exam | 903 | HSC <br> scaled | $\begin{aligned} & 35.9 \\ & 18.4 \end{aligned}$ | $\begin{aligned} & 4.2 \\ & 9.7 \end{aligned}$ | $\begin{aligned} & 47.0 \\ & 42.4 \end{aligned}$ | $\begin{aligned} & 45.0 \\ & 40.7 \end{aligned}$ | $\begin{aligned} & 41.0 \\ & 32.1 \end{aligned}$ | $\begin{aligned} & 38.5 \\ & 25.2 \end{aligned}$ | $\begin{aligned} & 36.0 \\ & 17.6 \end{aligned}$ | $\begin{aligned} & 33.5 \\ & 10.9 \end{aligned}$ |
| Metal and Engineering Exam | 565 |  | $\begin{aligned} & 33.1 \\ & 14.5 \end{aligned}$ | $\begin{aligned} & 4.7 \\ & 8.9 \end{aligned}$ | $\begin{aligned} & 47.0 \\ & 36.6 \end{aligned}$ | $\begin{aligned} & 42.5 \\ & 34.1 \end{aligned}$ | $\begin{aligned} & 38.5 \\ & 27.6 \end{aligned}$ | $\begin{aligned} & 36.0 \\ & 21.2 \end{aligned}$ | $\begin{aligned} & 33.0 \\ & 13.2 \end{aligned}$ | 30.5 6.7 |
| Primary Industries Exam | 603 | $\begin{array}{r} \text { HSC } \\ \text { scaled } \end{array}$ | $\begin{aligned} & 37.2 \\ & 16.4 \end{aligned}$ | $\begin{aligned} & 5.1 \\ & 9.6 \end{aligned}$ | $\begin{aligned} & 48.0 \\ & 39.8 \end{aligned}$ | $\begin{aligned} & 46.5 \\ & 38.4 \end{aligned}$ | $\begin{aligned} & 43.0 \\ & 29.9 \end{aligned}$ | $\begin{aligned} & 40.5 \\ & 22.8 \end{aligned}$ | $\begin{aligned} & 38.0 \\ & 15.7 \end{aligned}$ | $\begin{array}{r} 34.5 \\ 9.4 \end{array}$ |
| Retail Services Exam | 1,072 |  | $\begin{aligned} & 35.9 \\ & 16.2 \end{aligned}$ | $\begin{array}{r} 4.7 \\ 10.1 \end{array}$ | $\begin{aligned} & 45.0 \\ & 41.1 \end{aligned}$ | $\begin{aligned} & 44.0 \\ & 39.7 \end{aligned}$ | $\begin{aligned} & 41.0 \\ & 30.8 \end{aligned}$ | $\begin{aligned} & 39.0 \\ & 23.0 \end{aligned}$ | $\begin{aligned} & 36.5 \\ & 14.1 \end{aligned}$ | 33.0 7.9 |
| Tourism Travel and Events Exam | 338 | $\begin{array}{r} \text { HSC } \\ \text { scaled } \end{array}$ | $\begin{aligned} & 36.6 \\ & 19.5 \end{aligned}$ | $\begin{aligned} & 4.6 \\ & 8.9 \end{aligned}$ | $\begin{aligned} & 47.5 \\ & 41.3 \end{aligned}$ | $\begin{aligned} & 45.0 \\ & 39.6 \end{aligned}$ | $\begin{aligned} & 41.5 \\ & 31.0 \end{aligned}$ | $\begin{aligned} & 40.0 \\ & 26.2 \end{aligned}$ | $\begin{aligned} & 37.0 \\ & 18.8 \end{aligned}$ | $\begin{aligned} & 34.0 \\ & 12.8 \end{aligned}$ |

Table A4 Distributions of HSC marks by course: 2015 and 2014
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 | 2015 | 400 | 93.8 | 75.8 | 54.8 | 33.5 | 10.0 |
|  | 2014 | 410 | 91.2 | 79.8 | 55.6 | 28.3 | 10.0 |
| Agriculture | 2015 | 1,344 | 92.7 | 71.1 | 39.4 | 15.4 | 2.8 |
|  | 2014 | 1,372 | 93.4 | 74.8 | 44.1 | 19.5 | 4.6 |
| Ancient History | 2015 | 10,748 | 92.0 | 67.1 | 38.9 | 16.7 | 6.8 |
|  | 2014 | 11,198 | 91.3 | 66.9 | 38.2 | 16.3 | 6.3 |
| Biology | 2015 | 17,269 | 94.2 | 71.9 | 40.0 | 15.7 | 4.5 |
|  | 2014 | 17,138 | 94.2 | 71.6 | 37.8 | 13.8 | 4.3 |
| Business Studies | 2015 | 16,561 | 91.5 | 63.1 | 33.3 | 11.5 | 2.9 |
|  | 2014 | 15,991 | 91.1 | 62.7 | 32.3 | 11.6 | 2.4 |
| Chemistry | 2015 | 10,905 | 89.2 | 58.8 | 26.4 | 6.5 | 1.7 |
|  | 2014 | 11,173 | 88.3 | 53.1 | 24.3 | 8.1 | 2.9 |
| Community and Family Studies | 2015 | 7,957 | 94.2 | 67.6 | 34.3 | 13.4 | 3.1 |
|  | 2014 | 7,687 | 94.3 | 62.9 | 28.9 | 8.5 | 1.8 |
| Dance | 2015 | 901 | 88.1 | 54.7 | 22.1 | 3.4 | 1.4 |
|  | 2014 | 920 | 87.2 | 56.3 | 23.0 | 2.9 | 1.4 |
| Design and Technology | 2015 | 3,148 | 88.4 | 63.8 | 21.1 | 4.9 | 0.4 |
|  | 2014 | 3,121 | 89.1 | 62.7 | 24.6 | 4.8 | 0.5 |
| Drama | 2015 | 4,593 | 85.6 | 57.5 | 17.7 | 1.9 | 0.1 |
|  | 2014 | 4,753 | 86.7 | 57.8 | 15.4 | 1.4 | 0.1 |
| Earth and Environmental Science | 2015 | 1,468 | 92.3 | 57.2 | 27.8 | 8.9 | 2.2 |
|  | 2014 | 1,494 | 93.7 | 59.8 | 26.6 | 8.2 | 2.1 |
| Economics | 2015 | 5,089 | 88.6 | 53.9 | 25.1 | 7.6 | 2.4 |
|  | 2014 | 5,131 | 89.1 | 55.3 | 27.0 | 8.6 | 2.0 |
| Engineering Studies | 2015 | 2,054 | 90.5 | 63.0 | 28.6 | 5.8 | 1.3 |
|  | 2014 | 2,043 | 90.8 | 67.1 | 35.7 | 10.0 | 3.0 |
| English Standard | 2015 | 31,501 | 99.6 | 91.6 | 57.6 | 15.3 | 3.3 |
|  | 2014 | 31,483 | 99.7 | 91.8 | 56.5 | 14.3 | 2.8 |
| English Advanced | 2015 | 26,002 | 84.6 | 42.1 | 8.8 | 0.9 | 0.2 |
|  | 2014 | 26,729 |  |  | 8.4 | 0.8 | 0.2 |
| English Extension 1 | 2015 | 4,512 | 65.4 | 22.5 | 5.7 | 0.9 | 0.2 |
|  | 2014 | 4,848 | 69.4 | 29.3 | 6.8 | 1.1 | 0.3 |
| English Extension 2 | 2015 | 1,631 | 73.8 | 42.8 | 17.5 | 4.0 | 0.3 |
|  | 2014 | 1,776 | 76.8 | 49.2 | 22.5 | 6.8 | 1.7 |
| ESL | 2015 | 2,368 | 96.0 | 73.7 | 38.8 | 16.5 | 4.1 |
|  | 2014 | 2,291 | 95.5 | 71.4 | 33.8 | 10.4 | 2.1 |
| Food Technology | 2015 | 3,361 | 91.7 | 71.0 | 43.4 | 20.9 | 4.5 |
|  | 2014 | 3,538 | 92.5 | 70.9 | 44.4 | 19.9 | 3.3 |
| Geography | 2015 | 4,275 | 91.4 | 58.4 | 33.2 | 12.6 | 4.1 |
|  | 2014 | 4,418 | 92.5 | 56.0 | 30.6 | 14.9 | 6.1 |

Table A4 Distributions of HSC marks by course: 2015 and 2014 (continued)

| Course | Year | Number | Percentage of students with HSC mark less than: |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 45 | 40 | 35 | 30 | 25 |
| Industrial Technology | 2015 | 5,512 | 91.7 | 73.3 | 44.8 | 20.8 | 5.8 |
|  | 2014 | 5,360 | 91.0 | 71.5 | 42.4 | 17.4 | 5.5 |
| Information Processes and Technology | 2015 | 2,814 | 93.0 | 67.4 | 33.5 | 14.7 | 4.9 |
|  | 2014 | 2,756 | 92.7 | 71.3 | 32.4 | 11.4 | 3.0 |
| Legal Studies | 2015 | 10,297 | 89.2 | 59.4 | 31.3 | 10.1 | 2.6 |
|  | 2014 | 10,052 | 87.3 | 59.8 | 33.7 | 15.2 | 6.4 |
| Mathematics General 2 |  |  | 94.3 | 74.1 | 49.5 | 25.1 | 7.5 |
|  | 2014 | 31,321 | 94.5 | 74.7 | 48.7 | 24.0 | 6.4 |
| Mathematics | 2015 | 16,450 | 80.3 | 47.5 | 19.1 | 9.2 | 3.1 |
|  | 2014 | 16,693 | 78.2 | 46.1 | 18.3 | 8.5 | 3.5 |
| Mathematics Extension 1 | 2015 | 8,954 | 65.6 | 35.8 | 15.7 | 6.0 | 1.7 |
|  | 2014 | 9,022 | 69.6 | 36.8 | 15.4 | 5.8 | 1.9 |
| Mathematics Extension 2 | 2015 | 3,333 | 63.9 | 31.7 | 13.7 | 5.0 | 1.5 |
|  | 2014 | 3,371 | 68.5 | 35.2 | 13.5 | 5.0 | 1.3 |
| Modern History | 2015 | 11,053 | 88.4 | 55.9 | 27.4 | 9.8 | 3.5 |
|  | 2014 | 10,306 | 91.3 | 57.4 | 24.7 | 9.9 | 4.2 |
| History Extension |  | 1,878 | 78.0 | 49.8 | 21.7 | 6.5 | 2.3 |
|  | 2014 | 1,934 | 77.6 | 48.8 | 22.1 | 5.4 | 1.7 |
| Music 1 |  | 4,710 |  |  | 11.0 | 2.0 | 0.2 |
|  | 2014 | 5,002 | 8.1 .6 | 40.0 | 10.9 | 2.4 | 0.9 |
| Music 2 | 2015 | 694 | 63.4 | 12.0 | 0.3 | 0.1 | 0.0 |
|  | 2014 | 765 | 66.0 | 12.7 | 0.8 | 0.0 |  |
| Music Extension | 2015 | 424 | 43.6 | 18.4 | 6.8 | 1.2 | 0.0 |
|  | 2014 | $4 / 5$ | 25.1 | 4.6 | 0.8 | 0.4 | 0.0 |
| PDHPE | 2015 | 15,082 | 91.3 | 70.2 | 37.4 | 9.0 | 1.6 |
|  |  |  |  | 69.3 |  | 11.1 | 2.3 |
| Physics |  | 9,510 |  |  |  |  | 4.3 |
|  | 2014 | 9,598 | 91.4 | 68.7 | 33.3 | 8.8 | 2.2 |
| Senior Science | 2015 | 6,320 | 92.4 | 71.5 | 38.9 | 15.1 | 5.3 |
|  | 2014 |  | 92.2 |  |  | 9.8 | 2.4 |
| Society and Culture | 2015 | 4,566 | 88.2 | 52.9 | 19.3 | 5.2 | 1.8 |
|  | 2014 |  | 87.4 | 54.9 | 22.1 | 6.3 | 1.8 |
| Software Design and Development | 2015 | 1,783 | 91.5 | 69.3 | 32.5 | 10.5 | 1.6 |
|  | 2014 | 1,719 | 93.0 | 71.7 | 33.4 | 8.8 | 2.0 |
| Studies of Religion I | 2015 | 8,951 | 87.3 | 49.0 | 22.0 | 4.4 | 0.7 |
|  | 2014 | 9,299 | 87.9 | 51.1 | 23.9 | 5.9 | 1.1 |
| Studies of Religion II | 2015 | 5,902 | 93.6 | 59.7 | 28.9 | 10.0 | 3.4 |
|  | 2014 | 5,464 | 91.7 | 55.6 | 25.7 | 9.2 | 2.7 |
| Textiles and Design | 2015 | 1,635 | 84.6 | 52.4 | 20.3 | 5.3 | 1.0 |
|  | 2014 | 1,874 | 86.6 | 58.1 | 28.0 | 7.6 | 1.7 |
| Visual Arts | 2015 | 9,003 | 87.3 | 46.4 | 12.0 | 1.7 | 0.3 |
|  | 2014 | 9,071 | 89.3 | 51.2 | 14.5 | 2.5 | 0.2 |
| Arabic Continuers | 2015 | 182 | 89.6 | 42.3 | 14.8 | 4.9 | 1.6 |
|  | 2014 | 211 | 92.4 | 43.6 | 22.7 | 10.9 | 7.1 |

Table A4 Distributions of HSC marks by course: 2015 and 2014 (continued)

| Course | Year | Number | Percentage of students with HSC mark less than: |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 45 | 40 | 35 | 30 | 25 |
| Arabic Extension | 2015 | 53 | 77.4 | 50.9 | 24.5 | 3.8 | 0.0 |
|  | 2014 | 63 | 82.5 | 63.5 | 25.4 | 0.0 |  |
| Chinese Continuers | 2015 | 102 | 46.1 | 31.4 | 10.8 | 2.9 | 0.0 |
|  | 2014 | 83 | 72.3 | 32.5 | 10.8 | 2.4 | 0.0 |
| Chinese Background Speakers |  | 660 | 87.0 | 31.2 | 4.1 | 1.2 | 0.3 |
|  | 2014 | 635 | 87.1 | 31.2 | 1.3 | 0.6 | 0.2 |
| Heritage Chinese (Mandarin) |  | 127 | 73.2 | 18.1 | 2.4 | 0.0 |  |
|  | 2014 | 121 | 69.4 | 19.0 | 6.6 | 3.3 | 0.0 |
| French Beginners | 2015 | 647 | 78.4 | 55.6 | 28.9 | 12.7 | 4.8 |
|  | 2014 | 677 | 80.9 | 53.0 | 26.0 | 10.2 | 5.6 |
| French Continuers | 2015 | 727 | 69.3 | 33.7 | 13.2 | 2.5 | 0.6 |
|  | 2014 | 799 | 65.2 | 34.3 | 11.0 | 2.6 | 1.1 |
| French Extension | 2015 | 166 | 63.9 | 29.5 | 9.0 | 3.6 | 0.0 |
|  | 2014 | 200 | 60.5 | 21.0 | 5.0 | 1.0 | 0.0 |
| German Beginners | 2015 | 111 | 69.4 | 45.9 | 18.0 | 5.4 | 2.7 |
|  | 2014 | 69 | 58.0 | 39.1 | 13.0 | 4.3 | 0.0 |
| German Continuers |  | 238 |  | 43.3 | 16.0 |  | 0.8 |
|  | 2014 | 277 | 70.4 | 42.2 | 14.4 | 4.0 | 0.0 |
| German Extension | 2015 | 68 | 66.2 |  |  |  | 1.5 |
|  | 2014 | 61 | 68.9 | 29.5 | 3.3 | 0.0 |  |
| Indonesian Continuers | 2015 | 63 | 71.4 | 44.4 | 22.2 | 6.3 | 0.0 |
|  | 2014 | 64 | 71.9 | 35.9 | 4.7 | 0.0 |  |
| Indonesian Background Speakers | 2015 | 72 | 100.0 | 83.3 | 11.1 | 0.0 |  |
|  | 2014 | 08 | 98.5 | 80.9 | 14.7 | 2.9 | 0.0 |
| Italian Beginners | 2015 | 361 | 83.1 | 59.6 | 39.1 | 16.9 | 6.1 |
|  |  |  |  |  | 42.7 | 21.7 | 7.4 |
| Italian Continuers |  |  |  |  |  |  |  |
|  |  | 298 | 77.5 | 42.3 | 18.5 | 6.0 | 2.7 |
| Italian Extension | 2015 | 57 | 59.6 | 21.1 | 15.8 | 3.5 | 0.0 |
|  | 2014 | 67 | 77.6 | 56.7 | 20.9 | 4.5 | 0.0 |
| J apanese Beginners | 2015 | 642 | 86.9 | 61.7 | 39.1 | 18.2 | 7.3 |
|  | 2014 | 687 | 86.6 | 58.7 | 32.6 | 14.0 | 3.8 |
| Japanese Continuers | 2015 | 659 | 81.0 | 45.4 | 22.6 | 3.8 | 1.1 |
|  | 2014 | 624 | 82.9 | 42.0 | 21.3 | 4.0 | 0.6 |
| Japanese Extension | 2015 | 208 | 66.8 | 35.1 | 12.0 | 1.9 | 1.0 |
|  | 2014 | 191 | 70.7 | 28.3 | 3.7 | 0.0 |  |
| Korean Background Speakers | 2015 | 54 | 81.5 | 37.0 | 7.4 | 3.7 | 0.0 |
|  | 2014 | 63 | 84.1 | 49.2 | 15.9 | 3.2 | 0.0 |
| Latin Continuers | 2015 | 194 | 47.9 | 17.5 | 5.2 | 2.1 | 0.0 |
|  | 2014 | 161 | 56.5 | 25.5 | 7.5 | 5.0 | 0.0 |
| Latin Extension | 2015 | 129 | 22.5 | 8.5 | 2.3 | 0.0 |  |
|  | 2014 | 105 | 41.9 | 16.2 | 2.9 | 1.0 | 1.0 |
| Modern Greek Beginners | 2015 | 69 | 65.2 | 29.0 | 13.0 | 5.8 | 0.0 |
|  | 2014 | 47 | 57.4 | 38.3 | 17.0 | 10.6 | 8.5 |

Table A4 Distributions of HSC marks by course: 2015 and 2014 (continued)

| Course | Year | Number | Percentage of students with HSC mark less than: |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 45 | 40 | 35 | 30 | 25 |
| Modern Greek Continuers | 2015 | 95 | 73.7 | 32.6 | 4.2 | 0.0 |  |
|  | 2014 | 102 | 71.6 | 33.3 | 2.9 | 1.0 | 0.0 |
| Modern Greek Extension | 2015 | 43 | 48.8 | 25.6 | 0.0 |  |  |
|  | 2014 | 47 | 44.7 | 25.5 | 10.6 | 6.4 | 0.0 |
| Spanish Beginners | 2015 | 177 | 89.8 | 58.2 | 23.2 | 4.0 | 0.0 |
|  | 2014 | 202 | 85.1 | 63.4 | 31.7 | 10.9 | 2.0 |
| Spanish Continuers |  | 150 | 93.3 | 56.7 | 26.7 | 4.7 | 0.7 |
|  | 2014 | 169 | 88.8 | 54.4 | 21.3 | 7.1 | 0.6 |
| Spanish Extension | 2015 | 46 | 87.0 | 37.0 | 8.7 | 2.2 | 0.0 |
|  | 2014 | 49 | 83.7 | 49.0 | 16.3 | 2.0 | 0.0 |
| Vietnamese | 2015 | 145 | 95.2 | 57.2 | 9.7 | 2.1 | 0.0 |
|  | 2014 | 140 | 94.3 | 69.3 | 20.7 | 2.1 | 1.4 |
| Automotive Exam | 2015 | 463 | 98.7 | 86.6 | 59.4 | 21.2 | 1.7 |
|  | 2014 | 415 | 98.3 | 90.4 | 60.2 | 18.3 | 0.7 |
| Business Services Exam | 2015 | 1,140 | 96.4 | 70.3 | 38.1 | 8.5 | 1.5 |
|  | 2014 | 1,141 | 97.7 | 75.6 | 39.8 | 13.3 | 3.5 |
| Construction Exam | 2015 | 1,637 | 99.0 | 81.2 | 34.6 | 11.3 | 0.8 |
|  |  | 1,631 |  | 82.2 | 36.5 | 5.2 | 0.6 |
| Electrotechnology Exam | 2015 | 283 |  |  |  |  | 3.2 |
|  | 2014 | 305 | 99.3 | 89.8 | 45.2 | 13.4 | 1.0 |
| Entertainment Industry Exam | 2015 | 918 | 98.7 | 76.1 | 38.0 | 4.5 | 0.7 |
|  | 2014 | 911 | 96.9 | 81.4 | 40.0 | 8.7 | 1.8 |
| Financial Services Exam | 2015 | 152 | 90.1 | 69.1 | 32.9 | 8.6 | 2.6 |
|  | 2014 | 229 | 93.9 | 66.4 | 29.7 | 10.0 | 1.3 |
| Hospitality Exam | 2015 | 5,180 | 95.9 | 66.8 | 25.4 | 3.6 | 0.5 |
|  |  |  |  | 64.1 | 27.0 | 4.2 | 0.7 |
| Human Services Exam | 2015 | 585 |  | 82.2 | 39.7 |  | 0.5 |
|  | 2014 | 576 | 98.4 | 83.7 | 35.2 | 7.1 | 0.0 |
| Information and Digital Technology Exam | 2015 | 903 | 98.5 | 85.5 | 38.4 | 5.8 | 0.8 |
|  | 2014 | 1,015 | 98.3 | 76.7 | 28.2 | 9.2 | 1.4 |
| Metal and Engineering Exam | 2015 | 565 | 99.8 | 92.9 | 68.7 | 19.8 | 1.8 |
|  | 2014 | 756 | 99.1 | 89.7 | 55.2 | 22.6 | 6.1 |
| Primary Industries Exam | 2015 | 603 | 96.5 | 67.7 | 27.2 | 8.1 | 1.0 |
|  | 2014 | 614 | 95.4 | 73.3 | 21.8 | 5.4 | 1.5 |
| Retail Services Exam | 2015 | 1,072 | 99.6 | 78.7 | 35.7 | 10.3 | 1.1 |
|  | 2014 | 1,024 | 99.6 | 81.3 | 40.3 | 12.8 | 1.5 |
| Tourism Travel and Events Exam | 2015 | 338 | 98.8 | 74.3 | 26.3 | 10.4 | 0.9 |
|  | 2014 | 331 | 96.4 | 70.1 | 22.1 | 3.0 | 0.3 |

Table A5 Distributions of scaled marks by course: 2015 and 2014
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 |  | 400 | 100.0 | 97.3 | 91.5 | 85.0 | 80.0 | 73.3 | 64.0 |
|  | 2014 | 410 | 100.0 | 94.9 | 89.8 | 85.9 | 81.5 | 75.4 | 65.6 |
| Agriculture |  |  | 99.6 | 94.5 | 87.4 | 77.2 | 66.5 | 53.4 | 39.1 |
|  | 2014 | 1,372 | 99.3 | 94.8 | 88.0 | 78.1 | 66.9 | 54.3 | 40.4 |
| Ancient History | 2015 | $10,748$ | 98.8 | 93.6 | 83.4 | 68.5 | 51.3 | 35.5 | 22.5 |
|  | 2014 | 11,198 | 98.6 | 92.6 | 82.0 | 67.7 | 50.1 | 34.6 | 21.5 |
| Biology | 2015 | 17,269 | 98.9 | 91.9 | 77.8 | 60.0 | 42.4 | 26.9 | 15.0 |
|  | 2014 | 17,138 | 98.9 | 91.8 | 77.4 | 59.5 | 42.0 | 26.6 | 14.8 |
| Business Studies | 2015 | 16,561 | 99.2 | 93.2 | 81.1 | 68.0 | 52.9 | 37.8 | 24.5 |
|  | 2014 | 15,991 | 99.3 | 93.6 | 82.3 | 68.3 | 52.9 | 38.1 | 24.4 |
| Chemistry |  | 10,905 | 95.4 | 78.5 | 58.1 | 39.3 | 24.6 | 13.7 | 6.3 |
|  | 2014 | 11,173 | 96.3 | 78.4 | 56.8 | 39.1 | 24.8 | 14.3 | 7.1 |
| Community and Family Studies | 2015 | 7,957 | 100.0 | 98.8 | 92.1 | 82.0 | 69.1 | 54.8 | 39.7 |
|  | 2014 | 7,687 | 100.0 | 98.9 | 92.4 | 82.0 | 69.4 | 34.5 | 39.1 |
| Dance |  |  |  |  |  |  |  |  |  |
|  | 2014 | 920 | 98.4 | 91.3 | 83.0 | 72.8 | 60.8 | 45.3 | 27.5 |
| Design and Technology | 2015 | 3,148 | 99.8 | 96.6 | 87.6 | 77.5 | 63.9 | 47.6 | 30.2 |
|  | 2014 | 3,121 | 99.4 | 95.1 | 87.7 | 76.4 | 62.6 | 47.8 | 33.1 |
| Drama | 2015 | 4,593 | 98.4 | 92.1 | 83.3 | 70.4 | 55.3 | 38.6 | 23.1 |
|  |  |  |  | 93.1 | 83.3 | 70.4 | 55.7 | 39.7 | 22.7 |
| Earth and Environmental Science | 2015 | 1,468 | 99.4 | 94.5 | 85.4 | 69.9 | 55.2 | 38.6 | 24.4 |
|  |  | 1,494 | 99.1 | 93.6 | 83.7 | 68.2 | 50.3 | 34.9 | 21.5 |
| Economics | 2015 | 5,089 | 94.7 | 77.0 | 55.7 | 36.5 | 22.0 | 12.1 | 5.9 |
|  | 2014 | 5,131 | 96.9 | 78.5 | 54.2 | 33.9 | 20.8 | 12.2 | 6.4 |
| Engineering Studies | 2015 | 2,054 | 99.0 | 93.2 | 81.6 | 65.5 | 48.3 | 30.6 | 16.0 |
|  | 2014 | 2,043 | 98.8 | 93.1 | 81.9 | 66.1 | 48.7 |  | 13.8 |
| English Standard | 2015 | 31,501 | 99.9 | 99.5 | 96.9 | 89.2 | 74.9 | 54.3 | 31.4 |
|  | $2014$ | 31,483 | 99.9 | 99.6 | 97.2 | 90.0 | 75.9 |  | 33.2 |
| English Advanced | 2015 | 26,002 | 96.8 | 82.4 | 60.1 | 36.9 | 18.4 | 7.6 | 2.4 |
|  |  | 26,729 | 97.6 | 83.4 | 60.3 | 37.1 | 19.2 | 8.1 | 2.8 |
| English Extension 1 | 2015 | 4,512 | 92.6 | 64.0 | 33.2 | 15.7 | 6.3 | 2.5 | 0.7 |
|  |  | 4,848 | 92.8 | 67.1 | 38.3 | 17.4 | 6.1 | 1.9 | 0.5 |
| English Extension 2 | 2015 | 1,631 | 89.8 | 66.2 | 39.2 | 18.4 | 7.0 | 1.9 | 0.3 |
|  | 2014 | 1,776 | 90.0 | 68.8 | 41.6 | 20.0 | 8.2 | 2.2 | 0.6 |
| ESL | 2015 | 2,368 | 98.6 | 93.8 | 85.6 | 75.0 | 60.5 | 45.7 | 30.7 |
|  | 2014 | 2,291 | 98.3 | 93.6 | 85.0 | 73.9 | 59.7 | 44.8 | 30.7 |
| Food Technology | 2015 | 3,361 | 99.9 | 96.2 | 88.7 | 78.9 | 67.5 | 54.1 | 38.9 |
|  | 2014 | 3,538 | 99.8 | 96.2 | 87.8 | 78.9 | 66.8 | 55.4 | 41.0 |
| Geography | 2015 | 4,275 | 98.0 | 90.9 | 78.0 | 62.2 | 46.3 | 32.3 | 20.8 |
|  | 2014 | 4,418 | 98.5 | 90.8 | 78.4 | 63.1 | 47.6 | 33.4 | 21.4 |

Table A5 Distributions of scaled marks by course: 2015 and 2014 (continued)

| Course | Year | Number | Percentage of students with scaled mark less than: |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 45 | 40 | 35 | 30 | 25 | 20 | 15 |
| Industrial Technology | 2015 | 5,512 | 100.0 | 99.9 | 95.6 | 88.3 | 76.6 | 63.3 | 47.0 |
|  | 2014 | 5,360 | 100.0 | 99.9 | 96.3 | 88.7 | 78.9 | 65.7 | 49.9 |
| Information Processes and Technology | 2015 | 2,814 | 99.6 | 95.7 | 87.7 | 75.9 | 61.2 | 45.7 | 31.2 |
|  | 2014 | 2,756 | 99.6 | 95.0 | 87.1 | 77.0 | 62.7 | 47.7 | 32.2 |
| Legal Studies | 2015 | 10,297 | 98.5 | 92.0 | 78.8 | 63.2 | 47.2 | 31.8 | 19.8 |
|  | 2014 | 10,052 | 98.2 | 90.1 | 78.5 | 63.1 | 46.6 | 31.6 | 19.3 |
| Mathematics General 2 |  | 31,511 | 99.9 | 96.9 | 87.8 | 75.5 | 61.5 | 46.4 | 30.5 |
|  | 2014 | 31,321 | 99.9 | 97.5 | 88.4 | 75.4 | 60.9 | 45.6 | 30.3 |
| Mathematics |  | 16,450 | 95.0 | 80.4 | 59.4 | 39.2 | 23.6 | 14.1 | 8.0 |
|  | 2014 | 16,693 | 95.3 | 78.4 | 59.0 | 40.4 | 25.3 | 14.5 | 7.7 |
| Mathematics Extension 1 | 2015 | 8,954 | 80.1 | 48.3 | 24.0 | 10.2 | 4.2 | 1.4 | 0.5 |
|  | 2014 | 9,022 | 81.6 | 47.3 | 21.9 | 9.3 | 3.9 | 1.6 | 0.6 |
| Mathematics Extension 2 | 2015 | 3,333 | 61.6 | 19.8 | 6.8 | 2.4 | 0.8 | 0.2 | 0.0 |
|  | 2014 | 3,371 | 63.9 | 18.2 | 5.6 | 1.8 | 0.6 | 0.3 | 0.1 |
| Modern History | 2015 | 11,053 | 98.6 | 90.4 | 75.2 | 57.4 | 40.8 | 28.2 | 17.8 |
|  | 2014 | 10,306 | 98.8 | 90.3 | 74.4 | 56.1 | 39.5 | 26.7 | 17.6 |
| History Extension | 2015 | 1,878 | 97.8 | 79.3 | 52.2 | 23.7 | 7.8 | 2.9 | 0.7 |
|  |  |  | 97.9 | 80.9 | 52.0 | 24.6 | 9.7 | 2.9 | 1.2 |
| Music 1 | 2015 | 4,710 | 99.6 | 96.3 |  |  |  |  |  |
|  |  |  | 99.5 | 95.6 | 87.9 | 76.6 | 63.2 | 47.4 | 31.9 |
| Music 2 | 2015 | 694 | 92.9 | 73.8 | 50.0 | 29.0 | 15.1 | 6.3 | 1.3 |
|  | 2014 | 765 | 91.2 | 77.3 | 53.1 | 32.0 | 14.0 | 4.6 | 1.0 |
| Music Extension | 2015 | 424 | 80.0 | 63.4 | 45.0 | 24.8 | 12.0 | 3.8 | 0.2 |
|  |  | 475 | 80.0 | 68.0 | 51.4 | 29.3 | 14.3 | 4.0 | 0.8 |
| PDHPE | 2015 | 15,082 | 99.3 | 94.6 | 85.0 | 72.4 | 57.8 | 41.9 | 25.5 |
|  |  |  | 99.6 | 95.1 | 85.0 | 71.8 |  | 40.8 | 25.3 |
| Physics | 2015 | 9,510 | 96.2 | 82.7 | 62.8 | 43.8 | 28.9 | 16.9 | 7.7 |
|  |  | 9,598 | 97.5 | 82.2 | 62.2 | 43.2 | 28.1 | 16.2 | 7.7 |
| Senior Science | 2015 | 6,320 | 100.0 | 98.6 | 92.9 | 83.3 | 71.8 | 56.8 | 41.1 |
|  |  | 6,328 | 100.0 | 98.8 | 93.6 | 84.1 | 70.8 | 55.3 | 38.9 |
| Society and Culture | 2015 | 4,566 | 98.6 | 92.5 | 83.4 | 70.7 | 54.6 | 38.8 | 22.8 |
|  | 2014 | 4,398 | 99.1 | 94.2 | 84.1 | 71.5 | 56.0 | 39.4 | 23.4 |
| Software Design and Development | 2015 | 1,783 | 99.4 | 93.6 | 82.6 | 69.4 | 54.2 | 38.3 | 24.8 |
|  | 2014 | 1,719 | 98.4 | 92.1 | 82.3 | 69.2 | 54.3 | 39.8 | 24.7 |
| Studies of Religion I | 2015 | 8,951 | 99.4 | 92.7 | 77.6 | 57.4 | 36.8 | 19.7 | 8.4 |
|  | 2014 | 9,299 | 99.1 | 93.1 | 78.5 | 58.2 | 36.5 | 20.2 | 9.2 |
| Studies of Religion II | 2015 | 5,902 | 98.5 | 90.9 | 76.8 | 59.1 | 42.2 | 26.8 | 15.3 |
|  | 2014 | 5,464 | 98.7 | 90.9 | 75.9 | 57.1 | 38.2 | 23.7 | 12.5 |
| Textiles and Design | 2015 | 1,635 | 98.0 | 92.7 | 82.9 | 72.4 | 59.0 | 42.5 | 26.4 |
|  | 2014 | 1,874 | 99.2 | 93.2 | 85.8 | 73.9 | 59.4 | 43.1 | 27.7 |
| Visual Arts | 2015 | 9,003 | 98.8 | 94.1 | 84.6 | 72.8 | 59.7 | 45.0 | 30.6 |
|  | 2014 | 9,071 | 99.0 | 93.7 | 85.2 | 73.6 | 60.2 | 44.7 | 29.2 |

Table A5 Distributions of scaled marks by course: 2015 and 2014 (continued)

| Course | Year | Number | Percentage of students with scaled mark less than: |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 45 | 40 | 35 | 30 | 25 | 20 | 15 |
| Arabic Continuers | 2015 | 182 | 100.0 | 96.7 | 89.6 | 81.9 | 72.5 | 58.8 | 41.2 |
|  | 2014 | 211 | 99.5 | 97.2 | 91.0 | 80.1 | 72.0 | 60.2 | 44.1 |
| Arabic Extension | 2015 | 53 |  | 100.0 | 96.2 | 75.5 | 58.5 | 35.8 | 9.4 |
|  | 2014 | 63 | 100.0 | 98.4 | 96.8 | 82.5 | 49.2 | 15.9 | 0.0 |
| Chinese Continuers | 2015 | 102 | 91.2 | 68.6 | 46.1 | 35.3 | 25.5 | 9.8 | 4.9 |
|  | 2014 | 83 | 94.0 | 78.3 | 60.2 | 34.9 | 19.3 | 7.2 | 3.6 |
| Chinese Background Speakers | 2015 | 660 | 97.9 | 93.6 | 84.2 | 73.6 | 58.5 | 41.7 | 22.9 |
|  | 2014 | 635 | 97.5 | 92.0 | 85.5 | 72.9 | 56.1 | 44.1 | 30.1 |
| Heritage Chinese (Mandarin) |  | 127 | 92.9 | 80.3 | 62.2 | 37.8 | 18.9 | 11.0 | 2.4 |
|  | 2014 | 121 | 96.7 | 86.8 | 64.5 | 43.0 | 24.0 | 13.2 | 6.6 |
| French Beginners | 2015 | 647 | 98.3 | 90.3 | 80.2 | 68.0 | 54.6 | 37.7 | 25.0 |
|  | 2014 | 677 | 97.9 | 89.1 | 79.5 | 66.8 | 50.5 | 33.5 | 21.7 |
| French Continuers | 2015 | 727 | 88.7 | 67.3 | 43.3 | 25.9 | 14.4 | 6.1 | 1.7 |
|  | 2014 | 799 | 92.7 | 68.6 | 44.4 | 26.5 | 13.1 | 5.3 | 1.6 |
| French Extension | 2015 | 166 | 76.5 | 35.5 | 13.3 | 4.2 | 0.0 |  |  |
|  | 2014 | 200 | 84.5 | 40.5 | 9.0 | 1.0 | 0.5 | 0.0 |  |
| German Beginners | 2015 | 111 | 94.6 | 83.8 | 71.2 | 54.1 | 32.4 | 20.7 | 9.0 |
|  | $2014$ | 69 | 94.2 | 84.1 | 56.5 | 44.9 | 29.0 | 13.0 | 5.8 |
| German Continuers | 2015 | 238 | 89.9 | 71.8 | 47.5 | 30.3 | 16.4 | 8.8 | 4.6 |
|  |  | 277 |  | 14.0 | 52.3 | 33.9 | 19.9 | 11.2 | 4.0 |
| German Extension | 2015 | 68 | 83.8 | 60.3 | 26.5 | 7.4 | 1.5 | 1.5 | 1.5 |
|  |  | 61 | 88.5 | 55.7 | 27.9 | 4.9 | 1.6 | 0.0 |  |
| Indonesian Continuers | 2015 | 63 | 90.5 | 79.4 | 63.5 | 46.0 | 30.2 | 14.3 | 6.3 |
|  | 2014 | 64 | 96.9 | 81.3 | 59.4 | 48.4 | 32.8 | 10.9 | 1.6 |
| Indonesian Background Speakers | 2015 | 72 | 97.2 | 86.1 | 58.3 | 31.9 | 18.1 | 4.2 | 0.0 |
|  | 2014 | 68 | 95.6 | 85.3 | 69.1 | 45.6 | 14.7 | 4.4 | 2.9 |
| Italian Beginners | 2015 | 361 | 94.5 | 84.8 | 71.5 | 57.1 | 46.3 | 34.9 | 19.7 |
|  | 2014 | 351 | 96.0 | 88.3 | 76.4 | 60.7 | 47.0 | 34.2 | 20.8 |
| Italian Continuers | 2015 | 272 | 95.2 | 82.0 | 62.9 | 44.9 | 26.5 | 11.0 | 3.3 |
|  | 2014 | 298 | 95.6 | 80.2 | 61.1 | 38.9 | 21.1 | 12.4 | 5.7 |
| Italian Extension | 2015 | 57 | 89.5 | 63.2 | 35.1 | 15.8 | 12.3 | 3.5 | 0.0 |
|  | $2014$ | 67 | 88.1 |  | 20.9 |  | 0.0 |  |  |
| Japanese Beginners | 2015 | 642 | 98.9 | 93.6 | 81.0 | 67.9 | 52.3 | 38.3 | 24.3 |
|  | 2014 | 687 | 99.0 | 94.2 | 85.0 | 67.8 | 55.0 | 41.0 | 25.9 |
| Japanese Continuers | 2015 | 659 | 95.4 | 79.4 | 61.0 | 42.2 | 25.8 | 13.5 | 4.7 |
|  | 2014 | 624 | 96.0 | 76.8 | 54.2 | 34.8 | 21.3 | 10.4 | 3.7 |
| Japanese Extension | 2015 | 208 | 91.3 | 67.8 | 37.0 | 12.5 | 1.9 | 0.0 |  |
|  | 2014 | 191 | 92.7 | 66.0 | 23.0 | 3.7 | 0.5 | 0.0 |  |
| Korean Background Speakers | 2015 | 54 | 94.4 | 90.7 | 79.6 | 70.4 | 50.0 | 38.9 | 24.1 |
|  | 2014 | 63 | 95.2 | 92.1 | 82.5 | 68.3 | 57.1 | 44.4 | 25.4 |
| Latin Continuers | 2015 | 194 | 64.4 | 41.2 | 20.6 | 10.3 | 5.7 | 3.6 | 2.1 |
|  | 2014 | 161 | 77.0 | 37.9 | 16.1 | 8.1 | 5.0 | 2.5 | 0.0 |

Table A5 Distributions of scaled marks by course: 2015 and 2014 (continued)

| Course | Year | Number | Percentage of students with scaled mark less than: |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 45 | 40 | 35 | 30 | 25 | 20 | 15 |
| Latin Extension | 2015 | 129 | 58.1 | 22.5 | 10.9 | 5.4 | 2.3 | 0.8 | 0.0 |
|  | 2014 | 105 | 63.8 | 24.8 | 5.7 | 1.0 | 1.0 | 0.0 |  |
| Modern Greek Beginners | 2015 | 69 | 98.6 | 87.0 | 76.8 | 60.9 | 37.7 | 20.3 | $\begin{aligned} & 17.4 \\ & 34.0 \end{aligned}$ |
|  | 2014 | 47 | 91.5 | 76.6 | 61.7 | 55.3 | 46.8 | 38.3 |  |
| Modern Greek Continuers | 2015 | 95 | 95.8 | 86.3 | 77.9 | 68.4 | 54.7 | 37.9 | $\begin{aligned} & 18.9 \\ & 10.8 \end{aligned}$ |
|  | 2014 | 102 | 94.1 | 81.4 | 71.6 | 61.8 | 45.1 | 29.4 |  |
| Modern Greek Extension |  | 43 | 95.3 | 76.7 | 65.1 | 39.5 | 27.9 | 7.0 | $\begin{aligned} & 0.0 \\ & 8.5 \end{aligned}$ |
|  | 2014 | 47 | 89.4 | 74.5 | 57.4 | 44.7 | 29.8 | 14.9 |  |
| Spanish Beginners |  | 177 | 94.4 | 87.0 | 77.4 | 61.0 | 49.7 | 31.1 | $\begin{aligned} & 18.6 \\ & 24.3 \end{aligned}$ |
|  | 2014 | 202 | 95.5 | 90.1 | 80.2 | 68.3 | 54.0 | 41.1 |  |
| Spanish Continuers | 2015 | 150 | 96.0 | 88.7 | 79.3 | 66.0 | 49.3 | 36.0 | $\begin{aligned} & 24.7 \\ & 23.7 \end{aligned}$ |
|  | 2014 | 169 | 97.6 | 92.3 | 81.7 | 66.9 | 54.4 | 36.7 |  |
| Spanish Extension | 2015 | 46 | 95.7 | 84.8 | 63.0 | 37.0 | 13.0 | 6.5 | $\begin{aligned} & 2.2 \\ & 0.0 \end{aligned}$ |
|  | 2014 | 49 | 95.9 | 85.7 | 65.3 | 42.9 | 16.3 | 4.1 |  |
| Vietnamese | 2015 | 145 | 99.3 | 93.8 | 86.2 | 79.3 | 68.3 | 51.0 | $\begin{aligned} & 33.1 \\ & 30.0 \end{aligned}$ |
|  | 2014 | 140 | 97.1 | 92.9 | 85.0 | 74.3 | 60.0 | 43.6 |  |
| Automotive Exam | 2015 | 463 |  | 100.0 | 99.6 | 94.4 | 86.6 | 78.6 | $\begin{aligned} & 67.6 \\ & 63.9 \end{aligned}$ |
|  |  |  |  |  | 100.0 | 95.9 | 89.6 | 79.0 |  |
| Business Services Exam | 2015 | 1,140 | 100.0 | 98.9 | 92.1 | 85.4 | 74.0 | 60.5 | $\begin{aligned} & 43.8 \\ & 46.7 \end{aligned}$ |
|  |  | 1,141 |  | 99.4 | 96.1 | 87.6 | 75.6 | 64.3 |  |
| Construction Exam | 2015 | 1,631 |  | 100.0 | 98.0 | 91.6 | 81.2 | 68.8 | $\begin{aligned} & 54.7 \\ & 54.6 \end{aligned}$ |
|  | 2014 | 1,631 |  | 100.0 | 98.7 | 93.3 | 82.2 | 69.7 |  |
| Electrotechnology Exam | 2015 | 283 |  | 100.0 | 99.3 | 95.1 | 80.6 | 59.7 | $\begin{aligned} & 43.5 \\ & 45.2 \end{aligned}$ |
|  | 2014 | 305 |  | 100.0 | 97.4 | 87.2 | 80.3 | 61.6 |  |
| Entertainment Industry Exam | 2015 | 918 | 100.0 | 98.7 | 92.7 | 79.7 | 64.1 | 46.1 | $\begin{aligned} & 29.2 \\ & 26.6 \end{aligned}$ |
|  |  | 911 |  | 98.0 | 91.7 | 81.4 |  | 47.2 |  |
| Financial Services Exam | 2015 | 152 | 95.4 | 86.8 | 78.9 | 65.8 | 50.7 | 28.3 | $\begin{aligned} & 12.5 \\ & 13.5 \end{aligned}$ |
|  |  | 229 | 96.5 | 88.6 | 76.0 | 60.3 | 43.7 | 26.2 |  |
| Hospitality Exam | 2015 | 5,180 | 100.0 | 98.3 | 93.5 | 84.4 | 70.3 | 57.1 | $\begin{aligned} & 39.1 \\ & 34.7 \end{aligned}$ |
|  | 2014 | 5,559 | 100.0 | 99.2 | 93.6 | 84.7 | 70.4 | 53.8 |  |
| Human Services Exam | 2015 | 585 |  | 100.0 | 95.2 | 88.2 | 78.5 | 61.5 | $\begin{aligned} & 42.7 \\ & 38.0 \end{aligned}$ |
|  | $2014$ | 576 | 100.0 | 98.4 | 93.2 | 83.7 | 70.8 | 54.2 |  |
| Information and Digital Technology Exam | 2015 | 903 | 100.0 | 98.1 | 93.1 | 87.3 | 74.3 | 59.7 | $\begin{aligned} & 41.5 \\ & 39.4 \end{aligned}$ |
|  | 2014 | 1,015 | 100.0 | 99.6 | 96.2 | 87.1 | 73.8 | 58.4 |  |
| Metal and Engineering Exam | 2015 | 565 |  | 100.0 | 99.6 | 92.9 | 83.2 | 71.2 | $\begin{aligned} & 58.2 \\ & 57.9 \end{aligned}$ |
|  | 2014 | 756 |  | 100.0 | 98.8 | 92.1 | 82.4 | 71.0 |  |
| Primary Industries Exam | 2015 | 603 |  | 100.0 | 95.9 | 90.1 | 79.8 | 67.7 | $\begin{aligned} & 49.1 \\ & 50.0 \end{aligned}$ |
|  | 2014 | 614 |  | 100.0 | 97.4 | 91.4 | 83.1 | 67.3 |  |
| Retail Services Exam | 2015 | 1,072 | 100.0 | 99.3 | 94.9 | 87.6 | 78.7 | 67.3 | $\begin{aligned} & 51.1 \\ & 52.1 \end{aligned}$ |
|  | 2014 | 1,024 | 100.0 | 99.8 | 96.2 | 89.1 | 78.5 | 66.5 |  |
| Tourism Travel and Events Exam | 2015 | 338 | 100.0 | 99.4 | 94.7 | 87.6 | 71.0 | 55.0 | 36.7 |
|  | 2014 | 331 | 100.0 | 98.8 | 93.4 | 86.7 | 70.1 | 52.9 | 33.8 |

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 2015 or a previous year, and received an ATAR in 2015.
(iii) The ATAR students with > 10 units columns show the number and percentage of ATAR students who completed more than 10 units of ATAR courses.
(iv) The Percentage who counted course column shows the percentage of ATAR students who completed more than 10 units of ATAR courses for whom all units of that course contributed towards their ATAR.
(v) The Maximum ATAR including the course column shows the maximum ATAR of any student doing the course in any year and including all units from that course in their ATAR calculation.
(vi) The table excludes courses with less than 10 students.

| Course | Number receiving ATAR | ATAR students with > 10 units |  | Percentage who counted course | Maximum ATAR including the course |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Number | Percentage |  |  |
| Aboriginal Studies | 216 | 70 | 32 | 81 | 98.20 |
| Agriculture | 1,048 | 495 | 47 | 76 | 99.75 |
| Ancient History | 9,765 | 4,094 | 4.2 | 85 | 99.95 |
| Biology | 16,638 | 7,860 | 41 | 82 | 99.95 |
| Business Studies | 15,226 | 6,002 | 39 | 86 | 99.95 |
| Chemistry | 10,841 | 6,764 | 62 | 76 | 99.95 |
| Community and Family Studies | 6,344 | 2,109 | 33 | 87 | 97.95 |
| Dance | 775 | 241 | 31 | 57 | 98.65 |
| Design and Technology | 2,687 | 1,024 | 38 | 75 | 99.05 |
| Drama | 4,073 | 1,519 | 37 | 74 | 99.85 |
| Earth and Environmental Science | 1,334 | 530 | 40 | 81 | 99.85 |
| Economics | 5,080 | 2,984 | 59 | 76 | 99.95 |
| Engineering Studies | 1,985 | 1,016 | 51 | 73 | 99.85 |
| English Standard | 21,695 | 8,597 | 31 | 100 | 99.35 |
| English Advanced | 25,836 | 13,592 | 53 | 99 | 99.95 |
| English Extension 1 | 4,503 | 3,192 | 71 | 88 | 99.95 |
| English Extension 2 | 1,627 | 1,048 | 64 | 83 | 99.95 |
| ESL | 2,205 | 758 | 34 | 100 | 99.95 |
| Food Technology | 2,658 | 918 | 35 | 86 | 99.15 |
| Geography | 3,885 | 1,764 | 45 | 85 | 99.85 |
| Industrial Technology | 3,820 | 1,297 | 34 | 72 | 96.30 |
| Information Processes and Technology | 2,513 | 1,087 | 43 | 72 | 99.95 |
| Legal Studies | 9,625 | 4,191 | 44 | 85 | 99.95 |
| Mathematics General 2 | 28,008 | 9,479 | 34 | 71 | 99.85 |
| Mathematics | 15,423 | 9,306 | 60 | 72 | 99.95 |
| Mathematics Extension 1 | 8,797 | 6,493 | 74 | 87 | 99.95 |
| Mathematics Extension 2 | 3,302 | 1,825 | 55 | 95 | 99.95 |
| Modern History | 10,327 | 4,698 | 45 | 84 | 99.95 |
| History Extension | 1,877 | 1,491 | 79 | 81 | 99.95 |
| Music 1 | 3,907 | 1,428 | 37 | 61 | 99.30 |
| Music 2 | 693 | 510 | 74 | 74 | 99.95 |
| Music Extension | 433 | 365 | 84 | 72 | 99.95 |

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

| Course | Number receiving ATAR | ATAR students with > 10 units |  | Percentage who counted course | Maximum ATAR including the course |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Number | Percentage |  |  |
| PDHPE | 13,598 | 5,120 | 38 | 85 | 99.90 |
| Physics | 9,373 | 5,552 | 59 | 75 | 99.95 |
| Senior Science | 5,086 | 1,733 | 34 | 86 | 99.05 |
| Society and Culture | 4,187 | 1,426 | 34 | 84 | 99.90 |
| Software Design and Development | 1,680 | 818 | 49 | 73 | 99.85 |
| Studies of Religion I | 8,690 | 7,687 | 88 | 80 | 99.85 |
| Studies of Religion II | 5,704 | 1,858 | 33 | 85 | 99.85 |
| Textiles and Design | 1,402 | 456 | 33 | 80 | 99.90 |
| Visual Arts | 7,506 | 2,706 | 36 | 74 | 99.95 |
| Arabic Continuers | 152 | 85 | 56 | 72 | 94.55 |
| Arabic Extension | 47 | 41 | 87 | 73 | 94.10 |
| Armenian | 20 | 19 | 95 | 79 | 99.20 |
| Chinese Beginners | 26 | 9 | 35 | 100 | 95.60 |
| Chinese Continuers | 101 | 65 | 64 | 69 | 99.85 |
| Chinese Extension | 23 | 18 | 78 | 78 | 99.85 |
| Chinese Background Speakers | 660 | 237 | 36 | 68 | 99.25 |
| Heritage Chinese (Mandarin) | 126 | 70 | 56 | 56 | 99.90 |
| Classical Greek Continuers | 12 | 10 | 83 | 90 | 99.95 |
| Classical Hebrew Continuers | 33 | 20 | 61 | 65 | 98.85 |
| Classical Hebrew Extension | 22 | 18 | 82 | 89 | 98.70 |
| Filipino | 10 | 4 | 40 | 50 | 96.55 |
| French Beginners | 568 | 212 | 37 | 75 | 99.65 |
| French Continuers | 734 | 519 | 71 | 70 | 99.95 |
| French Extension | 169 | 145 | 86 | 85 | 99.95 |
| German Beginners | 103 | 47 | 46 | 72 | 99.90 |
| German Continuers | 233 | 152 | 65 | 63 | 99.95 |
| German Extension | 66 | 56 | 85 | 88 | 99.95 |
| Hindi | 26 | 21 | 81 | 57 | 98.25 |
| Indonesian Beginners | 38 | 13 | 34 | 85 | 94.85 |
| Indonesian Continuers | 62 | 38 | 61 | 68 | 99.35 |
| Indonesian Extension | 16 | 14 | 88 | 43 | 98.60 |
| Indonesian Background Speakers | 72 | 43 | 60 | 67 | 97.55 |
| Italian Beginners | 326 | 156 | 48 | 72 | 99.90 |
| Italian Continuers | 273 | 179 | 66 | 73 | 99.80 |
| Italian Extension | 56 | 47 | 84 | 87 | 99.80 |
| Japanese Beginners | 592 | 217 | 37 | 68 | 99.65 |
| J apanese Continuers | 644 | 392 | 61 | 61 | 99.95 |
| J apanese Extension | 206 | 159 | 77 | 87 | 99.90 |
| J apanese Background Speakers | 16 | 6 | 38 | 33 | 85.20 |
| Heritage J apanese | 20 | 10 | 50 | 60 | 95.40 |

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

| Course | Number receiving ATAR | ATAR students with > 10 units |  | Percentage who counted course | Maximum ATAR including the course |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Number | Percentage |  |  |
| Korean Continuers | 16 | 5 | 31 | 80 | 95.40 |
| Korean Background Speakers | 55 | 13 | 24 | 54 | 99.90 |
| Heritage Korean | 63 | 21 | 33 | 57 | 99.60 |
| Latin Continuers | 195 | 176 | 90 | 73 | 99.95 |
| Latin Extension | 130 | 121 | 93 | 77 | 99.95 |
| Macedonian | 16 | 11 | 69 | 64 | 90.05 |
| Modern Greek Beginners | 66 | 34 | 52 | 88 | 97.80 |
| Modern Greek Continuers | 86 | 52 | 60 | 73 | 98.10 |
| Modern Greek Extension | 37 | 34 | 92 | 88 | 97.20 |
| Modern Hebrew | 47 | 24 | 51 | 63 | 99.65 |
| Persian | 27 | 12 | 44 | 67 | 94.45 |
| Polish | 13 | 9 | 69 | 44 | 93.40 |
| Portuguese | 14 | 7 | 50 | 71 | 91.10 |
| Russian | 26 | 9 | 35 | 78 | 99.00 |
| Serbian | 16 | 4 | 25 | 75 | 99.90 |
| Spanish Beginners | 166 | 60 | 36 | 82 | 99.85 |
| Spanish Continuers | 141 | 93 | 66 | 71 | 99.75 |
| Spanish Extension | 46 | 42 | 91 | 90 | 98.25 |
| Tamil | 31 | 28 | 90 | 54 | 98.30 |
| Turkish | 34 | 19 | 56 | 53 | 94.50 |
| Vietnamese | 124 | 52 | 42 | 63 | 99.15 |
| Automotive Exam | 179 | 69 | 39 | 61 | 85.95 |
| Business Services txam | 888 | 302 | 34 | 76 | 94.15 |
| Construction Exam | 1,071 | 349 | 33 | 77 | 94.55 |
| Electrotechnology Exam | 177 | 63 | 36 | 70 | 92.25 |
| Entertainment Industry Exam | 829 | 260 | 31 | 78 | 97.10 |
| Financial Services Exam | 149 | 70 | 47 | 69 | 99.80 |
| Hospitality Exam | 4,364 | 1,531 | 35 | 77 | 99.15 |
| Human Services Exam | 492 | 191 | 39 | 76 | 95.65 |
| Information and Digital Technology Exam | 742 | 262 | 35 | 67 | 95.75 |
| Metal and Engineering Exam | 307 | 165 | 54 | 61 | 84.70 |
| Primary Industries Exam | 396 | 168 | 42 | 73 | 96.20 |
| Retail Services Exam | 819 | 322 | 39 | 68 | 92.70 |
| Tourism Travel and Events Exam | 280 | 81 | 29 | 74 | 96.25 |

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 2015 was 68.70.

| ATAR | Number | Number on or above | Percentage on or above |
| :---: | :---: | :---: | :---: |
| 99.95 | 46 | 46 | 0.1 |
| 99.90 | 46 | 92 | 0.2 |
| 99.85 | 46 | 138 | 0.2 |
| 99.80 | 47 | 185 | 0.3 |
| 99.75 | 46 | 231 | 0.4 |
| 99.70 | 47 | 278 | 0.5 |
| 99.65 | 46 | 324 | 0.6 |
| 99.60 | 48 | 372 | 0.7 |
| 99.55 | 46 | 418 | 0.7 |
| 99.50 | 47 | 465 | 0.8 |
| 99.45 | 42 | 507 | 0.9 |
| 99.40 | 51 | 558 | 1.0 |
| 99.35 | 47 | 605 | 1.1 |
| 99.30 | 42 | 647 | 1.2 |
| 99.25 | 50 | 697 | 1.3 |
| 99.20 | 45 | 742 | 1.3 |
| 99.15 | 45 | 787 | 1.4 |
| 99.10 | 45 | 832 | 1.5 |
| 99.05 | 51 | 883 | 1.6 |
| 99.00 | 44 | 927 | 1.7 |
| 99.00-99.95 | 927 | 927 | 1.7 |
| 98.00-98.95 | 923 | 1,850 | 3.3 |
| 97.00-97.95 | 930 | 2,780 | 5.0 |
| 96.00-96.95 | 923 | 3,703 | 6.6 |
| 95.00-95.95 | 915 | 4,618 | 8.3 |
| 94.00-94.95 | 921 | 5,539 | 9.9 |
| 93.00-93.95 | 924 | 6,463 | 11.6 |
| 92.00-92.95 | 916 | 7,379 | 13.2 |
| 91.00-91.95 | 909 | 8,288 | 14.9 |
| 90.00-90.95 | 920 | 9,208 | 16.5 |
| 89.00-89.95 | 905 | 10,113 | 18.1 |
| 88.00-88.95 | 908 | 11,021 | 19.8 |
| 87.00-87.95 | 911 | 11,932 | 21.4 |
| 86.00-86.95 | 898 | 12,830 | 23.0 |
| 85.00-85.95 | 904 | 13,734 | 24.6 |
| 84.00-84.95 | 899 | 14,633 | 26.3 |
| 83.00-83.95 | 887 | 15,520 | 27.8 |
| 82.00-82.95 | 894 | 16,414 | 29.4 |
| 81.00-81.95 | 898 | 17,312 | 31.1 |
| 80.00-80.95 | 889 | 18,201 | 32.7 |
| 79.00-79.95 | 882 | 19,083 | 34.2 |
| 78.00-78.95 | 876 | 19,959 | 35.8 |
| 77.00-77.95 | 866 | 20,825 | 37.4 |

Table A7 ATAR distribution (continued)

| ATAR | Number | Number on or above | Percentage on or above |
| :---: | :---: | :---: | :---: |
| 76.00-76.95 | 874 | 21,699 | 38.9 |
| 75.00-75.95 | 871 | 22,570 | 40.5 |
| 74.00-74.95 | 845 | 23,415 | 42.0 |
| 73.00-73.95 | 858 | 24,273 | 43.5 |
| 72.00-72.95 | 844 | 25,117 | 45.1 |
| 71.00-71.95 | 842 | 25,959 | 46.6 |
| 70.00-70.95 | 847 | 26,806 | 48.1 |
| 69.00-69.95 | 820 | 27,626 | 49.6 |
| 68.00-68.95 | 830 | 28,456 | 51.1 |
| 67.00-67.95 | 821 | 29,277 | 52.5 |
| 66.00-66.95 | 792 | 30,069 | 53.9 |
| 65.00-65.95 | 808 | 30,877 | 55.4 |
| 64.00-64.95 | 791 | 31,668 | 56.8 |
| 63.00-63.95 | 795 | 32,463 | 58.2 |
| 62.00-62.95 | 772 | 33,235 | 59.6 |
| 61.00-61.95 | 759 | 33,994 | 61.0 |
| 60.00-60.95 | 760 | 34,754 | 62.4 |
| 59.00-59.95 | 743 | 35,497 | 63.7 |
| 58.00-58.95 | 724 | 36,221 | 65.0 |
| 57.00-57.95 | 726 | 36,947 | 66.3 |
| 56.00-56.95 | 120 | 37,661 | 67.6 |
| 55.00-55.95 | 701 | 38,368 | 68.8 |
| 54.00-54.95 | 686 | 39,054 | 70.1 |
| 53.00-53.95 | 672 | 39,126 | 71.3 |
| 52.00-52.95 | 658 | 40,384 | 72.5 |
| 51.00-51.95 | 658 | 41,042 | 73.6 |
| 50.00-50.95 | 636 | 41,678 | 74.8 |
| 49.00-49.95 | 609 | 42,287 | 75.9 |
| 48.00-48.95 | 618 | 42,905 | 77.0 |
| 47.00-47.95 | 591 | 43,496 | 78.0 |
| 46.00-46.95 | 582 | 44,078 | 79.1 |
| 45.00-45.95 | 555 | 44,633 | 80.1 |
| 44.00-44.95 | 550 | 45,183 | 81.1 |
| 43.00-43.95 | 527 | 45,710 | 82.0 |
| 42.00-42.95 | 531 | 46,241 | 83.0 |
| 41.00-41.95 | 494 | 46,735 | 83.9 |
| 40.00-40.95 | 487 | 47,222 | 84.7 |
| 39.00-39.95 | 463 | 47,685 | 85.6 |
| 38.00-38.95 | 458 | 48,143 | 86.4 |
| 37.00-37.95 | 441 | 48,584 | 87.2 |
| 36.00-36.95 | 428 | 49,012 | 87.9 |
| 35.00-35.95 | 410 | 49,422 | 88.7 |
| 34.00-34.95 | 383 | 49,805 | 89.4 |
| 33.00-33.95 | 378 | 50,183 | 90.0 |
| 32.00-32.95 | 367 | 50,550 | 90.7 |
| 31.00-31.95 | 347 | 50,897 | 91.3 |
| 30.00-30.95 | 342 | 51,239 | 91.9 |

Table A8 ATAR percentiles: 2011-2015
Note: This table shows the ATAR at selected percentiles of the ATAR cohort.

| Percentile | ATAR 2011 | ATAR 2012 | ATAR 2013 | ATAR 2014 | ATAR 2015 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 100 | 99.95 | 99.95 | 99.95 | 99.95 | 99.95 |
| 99 | 99.40 | 99.40 | 99.40 | 99.35 | 99.40 |
| 98 | 98.80 | 98.80 | 98.80 | 98.75 | 98.75 |
| 95 | 97.00 | 97.05 | 97.00 | 96.95 | 96.95 |
| 90 | 94.05 | 94.10 | 94.00 | 93.95 | 93.95 |
| 85 | 91.05 | 91.15 | 91.00 | 90.90 | 90.90 |
| 80 | 88.05 | 88.15 | 88.00 | 87.85 | 87.85 |
| 75 | 85.05 | 85.15 | 84.95 | 84.80 | 84.75 |
| 70 | 82.00 | 82.10 | 81.90 | 81.70 | 81.65 |
| 60 | 75.80 | 75.95 | 75.70 | 75.40 | 75.25 |
| 50 | 69.25 | 69.55 | 69.20 | 68.95 | 68.70 |
| 40 | 62.30 | 62.75 | 62.40 | 62.15 | 61.70 |
| 30 | 54.70 | 55.30 | 54.90 | 54.70 | 54.05 |

Table A9 Relationship between the ATAR and aggregates: 2011-2015
Note: This table shows the lowest aggregate of scaled marks corresponding to each of the selected ATARs.

| ATAR | Lowest aggregate |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :---: |
|  | 2011 | 2012 | 2013 | 2014 | 2015 |  |
| 99.95 | 476.5 | 475.2 | 477.9 | 475.3 | 478.1 |  |
| 99.50 | 456.2 | 454.2 | 455.0 | 454.0 | 457.9 |  |
| 99.00 | 445.6 | 443.9 | 443.8 | 444.5 | 446.9 |  |
| 98.00 | 432.2 | 429.1 | 429.5 | 431.2 | 432.4 |  |
| 95.00 | 403.1 | 401.6 | 402.6 | 404.4 | 404.2 |  |
| 90.00 | $3 / 1.2$ | 369.4 | 371.3 | 372.2 | 371.2 |  |
| 85.00 | 343.7 | 343.0 | 344.8 | 345.1 | 343.8 |  |
| 80.00 | 318.9 | 318.4 | 321.3 | 320.6 | 319.9 |  |
| 75.00 | 295.7 | 295.3 | 297.9 | 296.9 | 297.0 |  |
| 70.00 | 274.1 | 272.8 | 276.1 | 275.0 | 274.8 |  |
| 65.00 | 252.9 | 251.1 | 253.5 | 253.3 | 253.1 |  |
| 60.00 | 233.1 | 229.9 | 232.2 | 231.9 | 231.4 |  |
| 55.00 | 213.0 | 209.5 | 211.3 | 210.8 | 211.4 |  |
| 50.00 | 193.5 | 190.5 | 191.3 | 189.9 | 191.9 |  |

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## Report on the Scaling of the 2015 NSW Higher School Certificate

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ISSN 1449-8723 Printed May 2016
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## About this publication

This report contains information on the calculation of the Australian Tertiary Admission Rank (ATAR) in 2015. 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.

## Cover picture

Zoe Heytman
Northern Beaches Secondary College Freshwater Senior Campus

## Earth and Elements (Painting)

My work is a homage to the beauty of the natural world. It deliberately focuses on the sublime and exquisite complexity of nature, because we so often overlook it and take it for granted. In revealing the depth and wonder of the natural world around me, I have been able to reflect on my place within in it and learn more about who I am.

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## 2016 edition

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[^0]:    ${ }^{2}$ These are percentages of the number of applicants in the given ATAR band.

