



# Report on the Scaling of the 2011 NSW Higher School Certificate

NSW Vice-Chancellors' Committee  
– Technical Committee on Scaling

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## Preface

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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 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 the Board of Studies, to schools or to other agencies.

This report contains information on the calculation of the ATAR in 2011.

**Professor Neville Weber**

Chair, Technical Committee on Scaling

April 2012

## Acknowledgements

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

- Staff of the NSW Board of Studies 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

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### The Board

The Board refers to the NSW Board of Studies.

### UAC

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

### ABS

The ABS is the Australian Bureau of Statistics.

### Board Developed courses

Board Developed courses are courses whose syllabuses have been developed by the NSW Board of Studies.

### Board Endorsed courses

Board Endorsed courses are courses whose syllabuses have been approved by the NSW Board of Studies but which do not have formal examinations conducted by the NSW Board of Studies.

### ATAR courses

ATAR courses are Board Developed courses for which there are examinations conducted by the NSW Board of Studies 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.

### HSC cohort

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

### 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.

### SC cohort

SC cohort refers to students who completed the School Certificate tests in a particular year.

### VET examination courses

The VET Curriculum Frameworks are based on training packages where the assessment is competency based. As competency-based assessment does not yield a mark that can be used in the ATAR calculations, the NSW Board of Studies 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 NSW Board of Studies. 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 new 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, [www.boardofstudies.nsw.edu.au](http://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. For most Board Developed courses, a Course Report is also provided which 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 range 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 Band 3, the examination mark reported on their Record of Achievement for that course will lie between 60 and 69. **In general this mark, termed the aligned examination mark, will differ from the mark the student actually gained on the examination (the raw examination mark).**

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

### 1.2.3 School assessments

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

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, [www.boardofstudies.nsw.edu.au](http://www.boardofstudies.nsw.edu.au).

## 2 The Australian Tertiary Admission Rank (ATAR) – an overview

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### 2.1 Background

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 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.

From 1998 to 2008 overall academic achievement by students in NSW and the ACT was reported via the Universities Admission Index (UAI). The ranking indices used in other states had different names. The Australasian Conference of Tertiary Admission Centres (ACTAC) agreed to adopt a common name for the ranking index, the Australian Tertiary Admissions Rank (ATAR) across all states and territories. The name change was to emphasise the common scale used for reporting student ranks. NSW and the ACT adopted the new name in 2009. All states, except Queensland, now use the new name.

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 as admissible to any particular university course the same proportion of each state's students.

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.

Since 1998 NSW has used the School Certificate tests as the link that enables 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 has been augmented to more accurately reflect the corresponding Year 7 cohort that is used in other states.

The ATAR is reported as a **number** between 0 and 99.95 with increments of 0.05. The ATAR is not a mark. Specifically, a student's ATAR indicates the position of that student relative to their Year 7 cohort. Students who receive an ATAR of 80.00 in 2011, for example, have performed well enough in the HSC to place them 20% from the top of their Year 7 cohort, if all the 2006 Year 7 students completed Year 12 and were eligible for an ATAR in 2011.

Students who indicate on their HSC entry forms that they wish to be notified of their ATARs will receive an ATAR Advice Notice from the 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 2011 were:

- Accounting<sup>1</sup>
- Automotive Examination
- Business Services Examination
- Construction Examination
- Electrotechnology Examination
- Entertainment Industry Examination
- Hospitality Examination
- Information Technology Examination
- Metal and Engineering Examination
- Primary Industries Examination
- Retail Services Examination
- Tourism and Events Examination.

<sup>1</sup> A Board Developed course delivered by TAFE.

In 2010 Industrial Technology was based on a new syllabus and as a result changed its classification to Category A. Industrial Technology completed before 2010 is classified as a Category B course.

## 2.3 Eligibility for an ATAR in 2011

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

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

## 2.4 Calculation of the ATAR

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

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

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

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

## 2.5 The ATAR Advice Notice

The ATAR Advice Notice includes:

- the student's ATAR
- a list of the ATAR courses 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.

<b>2011 Australian Tertiary Admission Rank Advice</b>				
<b>Your Australian Tertiary Admission Rank (ATAR): 74.30 *SEVEN*FOUR***THREE*ZERO</b>				
Course Name	Category	Year completed	Unit value	Units included in calculation of ATAR
Business Studies	A	2011	2	1
English Standard	A	2011	2	2
Mathematics	A	2011	2	2
Studies of Religion I	A	2011	1	0
French Continuers	A	2011	2	2
French Extension	A	2011	1	1
Hospitality Examination	B	2011	2	2

## 3 Calculating the ATAR in 2011

### 3.1 Overview

Tertiary institutions are concerned with ranking school leaver applicants. From their perspective, the importance of HSC marks is how 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 2011 there were 27,861 different enrolment patterns for ATAR-eligible students; only 194 of these 27,861 combinations were completed by 20 or more students and 20,278 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 ATAR is 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.

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.

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

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

The penultimate step is to determine what the percentiles would have been if all students in their Year 7 cohort completed Year 12 and were eligible for an ATAR five years later. 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, which does not assume that one course is intrinsically more difficult than another or that the quality of the course candidature is always the same, is carried out afresh each year.

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 marks calculated in the year the courses are completed.

## 3.2 The scaling process in 2011

The scaling procedure used to produce the aggregates in 2011 was unchanged from that used in 2010.

### 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<sup>1</sup>
- an examination mark, which has been aligned to course standards
- a moderated school assessment, which has been aligned to course standards
- an HSC mark.

<sup>1</sup>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.

### 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 2011 the maximum possible scaled mark in a course was given by the smaller of 50 and the scaled mean + 2.47 times the initial scaled standard deviation, where the scaled mean and initial scaled standard deviation of the course are determined using the scaling algorithm.

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

### 3.2.7 Scaling individual marks

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

If the actual maximum scaled mark in a course is less than the maximum possible scaled mark a further linear transformation is applied. The effect of this linear transformation is that, while the scaled mean for a course is not changed, the standard deviation is increased when the actual maximum scaled mark in the course is changed to be the same as the maximum possible scaled mark. 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. 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 2011 ATAR cohort. From the table it can be seen that, for example, 76.9% of the 2011 ATAR cohort received an aggregate mark of 350 or less.

**Table 3.1 ATAR-eligible percentiles corresponding to selected aggregates: 2011**

Aggregate	ATAR-eligible percentile
450.0	98.7
400.0	90.7
350.0	76.9
300.0	60.3
250.0	42.7
200.0	26.4
150.0	13.2

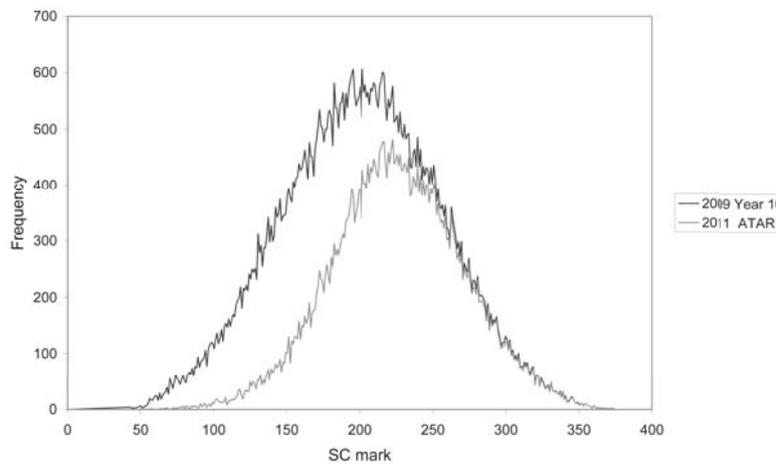
### 3.2.9 Calculating the ATAR – establishing the link

The percentiles which have been calculated show students' positions relative to their 2011 ATAR cohort. The next step is to relate the ATAR eligible cohort to the 2009 School Certificate (SC) cohort. An observed score equating procedure is employed using the SC test results as the anchor variable.

A total SC mark is first calculated for each student. In 2009 the composite SC mark for each student was based on the student's results in the SC tests in English-literacy, Mathematics, Science, and Australian History, Geography, Civics and Citizenship. The maximum possible SC mark was 400. Of the 54,897 students in the 2011 ATAR cohort, 49,975 had completed the SC tests in 2009; 62.2% of the 80,287 students in the 2009 SC cohort.

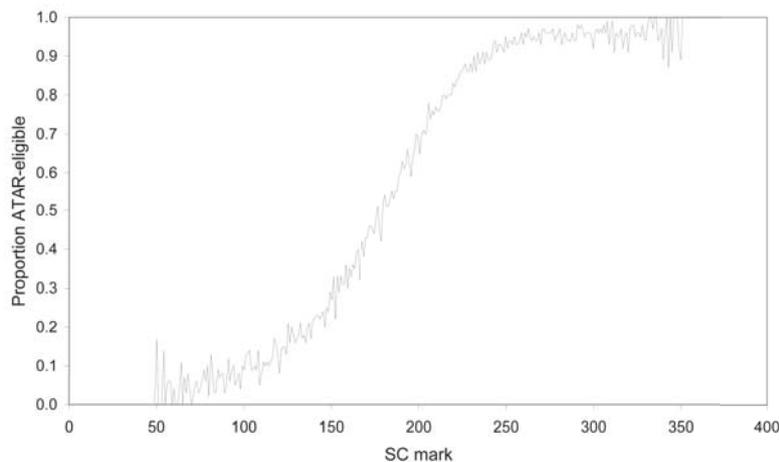
The next step is to calculate frequency distributions of the SC mark for all 2009 Year 10 students and for those who were eligible for an ATAR in 2011. The differences in the two frequency distributions (Figure 3.1) show that the 2009 Year 10 students who were eligible for an ATAR in 2011 were generally academically more able than the total 2009 SC cohort.

**Figure 3.1 Frequency distributions of SC marks for the 2009 Year 10 cohort and for students who were also in the 2011 ATAR cohort**



Another way of presenting the data is to calculate the proportion of students on each SC mark in 2009 that subsequently gained an ATAR in 2011 and plot the proportions against corresponding SC marks. The resultant graph (Figure 3.2) shows that the likelihood of 2009 Year 10 students continuing with their schooling and being eligible for an ATAR in 2011 increases with SC mark.

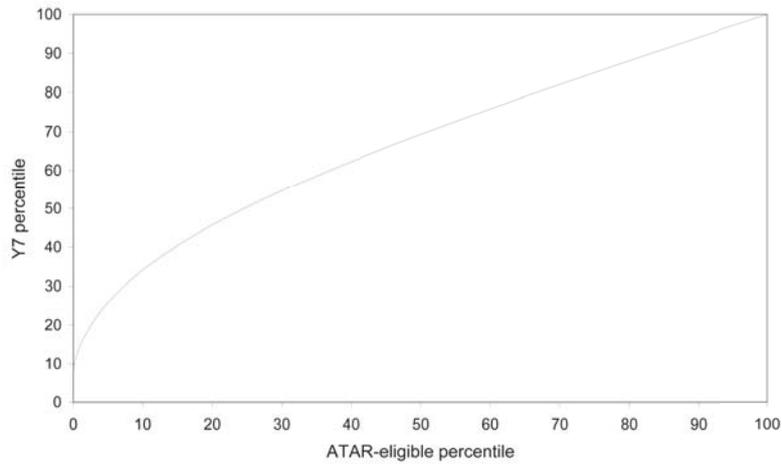
**Figure 3.2 Proportion of the 2009 Year 10 cohort who were also in the 2011 ATAR cohort by SC mark**



The data underlying Figure 3.1 are then used to link a student's position relative to their 2011 ATAR cohort, their ATAR-eligible percentile, with their position relative to their 2006 Year 7 cohort, their Y7 percentile (Figure 3.3). This is done by augmenting the 2009 SC cohort with 7,447 fictitious students

allocated an SC mark of 1. The extra 7,447 students bring the size of the cohort into agreement with the size of the 2006 Year 7 population as reported by the ABS. The early-leavers are incorporated into the process by applying the simplifying assumption that, had they completed the School Certificate, their performance would be lower than the performance of the corresponding SC cohort.

**Figure 3.3 Plot showing relationship between ATAR-eligible and Y7 percentiles**



This link is determined by calculating, for each SC mark:

- the percentage of the Y7 cohort who have an SC mark less than or equal to the given SC mark (Y7 percentile), and
- the percentage of those who were also in the 2011 ATAR cohort who had an SC mark less than or equal to the given SC mark (ATAR-eligible percentile).

The relationship between the two sets of percentages are shown in Table 3.2 for a selected set of ATAR-eligible percentiles. In this table, the percentiles have been rounded to one decimal place but for the actual calculations they are not rounded.

**Table 3.2 Relationship between ATAR-eligible percentiles and Y7 percentiles**

ATAR-eligible percentile	Y7 percentile
99.0	99.4
90.0	94.1
80.0	88.1
70.0	82.0
60.0	75.8
50.0	69.3
40.0	62.3
30.0	54.7
20.0	45.8
15.0	40.5

These equivalences show, for example, that students who were better than 90.0% of the 2011 ATAR-eligible cohort would have been better than 94.1% of the 2006 Year 7 cohort.

### 3.2.10 Calculating the ATAR – the final step

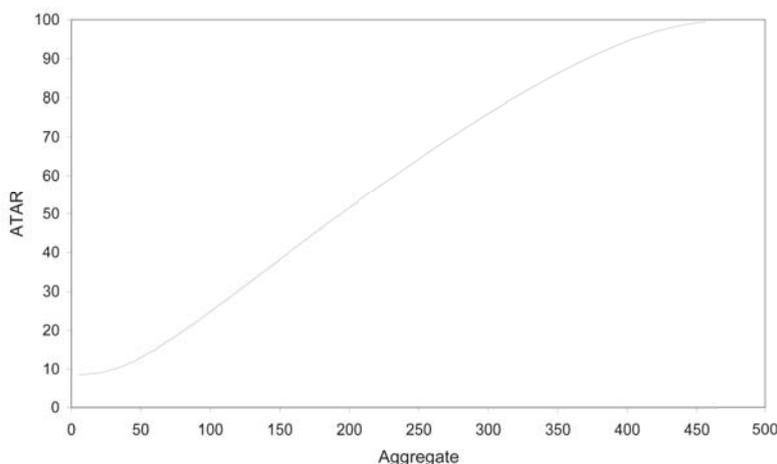
The last step is to determine the relationship between aggregate and Y7 percentile. This is done by converting the ATAR-eligible percentiles found in section 3.2.8 to Y7 percentiles using the equivalences from section 3.2.9. When truncated to the nearest 0.05, these Y7 percentiles become the ATARs.

The relationship between aggregate and ATAR is shown graphically in Figure 3.4 and, for selected aggregates, in Table 3.3.

**Table 3.3 Relationship between aggregate and ATAR**

Aggregate	ATAR
450.0	99.25
400.0	94.50
350.0	86.20
300.0	75.90
250.0	64.20
200.0	51.70
150.0	38.25

**Figure 3.4 Relationship between aggregate and ATAR**



The following example uses data from Tables 3.1 and 3.2 to illustrate the procedure. In the actual ATAR calculations the full data set is used, not just the data presented in these tables. The ATAR estimated from data presented in these tables will only be an estimate of the actual ATAR which is calculated using the full data set.

Table 3.1 shows that students with an aggregate of 350.0 performed well enough in the HSC to be 23.1% from the top of the 2011 ATAR cohort; a percentile of 76.9. From Table 3.2 we can estimate by linear interpolation that students who are at the 76.9<sup>th</sup> percentile of the ATAR-eligible cohort are at the 86.21<sup>th</sup> percentile of the 2006 Year 7 cohort. This means that students with an aggregate of 350.0 have performed well enough in the HSC to be at the 86.21<sup>th</sup> percentile of their Year 7 cohort. Their percentile is truncated, giving an estimated ATAR of 86.20.

## 4 The HSC and ATAR in 2011 – some results

### 4.1 Overview

In 2011 a total of 71,159 students completed at least one HSC course, but 1,850 were removed from the database as they completed no ATAR course in 2011. Of the remaining pool of 69,309 students 93.3% received an HSC and 79.2% received an ATAR. Only 26 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, 96.0% of those receiving an ATAR in 2011 included only 2011 courses in their aggregate.

The percentage of students enrolled in at least one ATAR course who were female (52%) was higher than the previous year, as was the percentage of students who received an ATAR who were female (53.4%).

### 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 satisfy the requirements for an ATAR. These students normally complete six or eight units of Board Developed courses, and choose the remaining units from Board Endorsed courses. They receive an HSC but not an ATAR. In 2011 there were 9,824 such students.

**Table 4.1 Proportion of students receiving an ATAR/UAI: 2006–2011**

Year	HSC candidature	Students receiving an ATAR/UAI	
		Number	%
2006	64,274	50,744	78.9
2007	65,005	51,036	78.5
2008	65,757	51,978	79.0
2009	66,612	52,402	78.7
2010	68,536	54,221	79.1
2011	69,309	54,897	79.2

### 4.3 Number of units of ATAR courses completed

The pattern in 2011 was similar to that observed in 2010, with 45.2% completing exactly 10 ATAR units and 34.6% completing more than the required minimum number of ATAR units (Table 4.2).

**Table 4.2 Percentage of students completing specified numbers of units<sup>1</sup> of ATAR courses: 2008–2011**

Number of units	2008	2009	2010	2011	
	%	%	%	%	Number
1	0.1	0.2	0.2	0.2	131
2	3.3	3.7	4.1	4.4	3,068
3	0.3	0.3	0.4	0.4	276
4	2.9	3.2	3.4	3.5	2,418
5	0.1	0.1	0.1	0.2	104
6	5.8	5.9	5.7	5.6	3,869
7	0.2	0.2	0.2	0.2	135
8	6.7	6.3	5.9	5.5	3,788
9	0.4	0.4	0.4	0.3	234
10	42.9	43.2	44.3	45.2	31,323
11	19.6	19.2	18.8	18.3	12,677
12	15.0	14.9	14.3	14.1	9,782
13	2.1	1.9	1.8	1.7	1,182
14	0.4	0.3	0.4	0.4	249
15+	0.1	0.1	0.1	0.1	73
<b>HSC cohort</b>	<b>65,757</b>	<b>66,612</b>	<b>68,536</b>		<b>69,309</b>

<sup>1</sup> The units include current year units and units accumulated in previous years.

#### 4.4 Course enrolments – Table A1

Table A1 in the Appendix provides, for each course, the size of the candidature, the number who received an HSC in 2011, the number who received an ATAR in 2011, 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 2011 as well as those who completed the course in previous years and completed at least one ATAR course in 2011. 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.

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

A total of 18,525 students enrolled in at least one VET course, of which 13,812 students enrolled in a VET examination course. The proportion taking a VET examination course (74.6%) is similar to 2010 (74.1%).

Overall, 79.2% of the 2011 HSC cohort received ATARs but the percentage varied across courses, from 58.2% to 100% for Category A courses with candidatures exceeding 100. For students enrolled in any VET courses the overall figure was 58.1% but was higher, 77.0%, 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 2011. 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 lies in Band 4.

Comparison of Table A2 with the corresponding table in 2010 shows that distribution of HSC marks has changed for some courses. (See Section 5.1.)

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

Table A3 in the Appendix presents, for each course, descriptive statistics and the 99th, 90th, 75th, 50th and 25th percentiles for HSC and scaled marks. Data 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 2011 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 indicates a student's position in the course candidature if all students had 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 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 performances in an Extension course (except for Mathematics Extension 2) are allocated one of the six integer grades 45.0 to 50.0. Thus after aligning and rounding, for each HSC mark there can be a range of raw marks and hence a range of scaled marks. There is, in general, no unique scaled mark for an HSC mark.

A given HSC mark often corresponds to a range of raw and scaled marks and hence to a range of percentiles. Table A3 gives the HSC mark at the specified percentile. Not all students with that HSC mark will be at that percentile when the raw marks are considered. For example in Latin Extension the HSC mark at the 75th percentile was 48.0. Students with a Latin Extension HSC mark of 48.0 in fact corresponded to the scaled mark percentile range 59.0 to 85.0.

The scaled marks reported in Table A3 are the scaled marks at the specified percentiles. The 75th percentile of the scaled mark distribution in Latin Extension was 46.1 but there was a range of scaled marks achieved by those with an HSC mark of 48.0.

Looking at French Extension in Table A3 we see that the maximum mark and the 99th percentile of the HSC distribution are both 49.0 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 75th and 90th percentiles for Geography, Legal Studies and Music 2.

**Table 4.3 Scaled marks for selected percentiles**

Course	Scaled mean	Scaled mark for	
		P <sub>90</sub>	P <sub>75</sub>
Geography	25.4	39.0	33.2
Legal Studies	25.4	39.3	33.9
Music 2	33.7	44.8	39.9

Geography and Legal Studies have the same scaled mean and similar scaled marks corresponding to the 75th and 90th percentiles. Music 2 has a higher scaled mean and higher scaled marks at the two percentiles. The table also shows that Legal Studies students in the top 10% of the candidature have scaled marks comparable to those obtained by students in the top 25% of the Music 2 candidature.

#### 4.7 Distribution of ATARs – Table A7

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

An ATAR of 99.00 does **not** represent the top 1% of the ATAR cohort; 1.7% of the 2011 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% of the 2006 Year 7 cohort if all those students continued to Year 12 and had been eligible for an ATAR in 2011. From Table 4.4 we see that in 2011 16.8% of the ATAR-eligible students received an ATAR of 90.00 or above and 33.3% gained an ATAR of 80.00 and above.

**Table 4.4 Percentage of ATAR students receiving specific ATARs and above: 2009–2011**

ATAR	2009 %	2010 %	2011 %
99.00	1.8	1.7	1.7
95.00	8.9	8.6	8.5
90.00	17.6	17.2	16.8
80.00	34.6	33.9	33.3
70.00	50.4	49.7	48.9
60.00	64.4	64.0	63.2
50.00	76.4	76.1	75.5

**Table 4.5 Median ATAR : 2009–2011**

Year	Median ATAR
2009	70.25
2010	69.80
2011	69.25

The median ATAR has been decreasing, reflecting the growth in numbers staying on to Year 12 and receiving an ATAR. The increase in student numbers has not been evenly distributed across the range of ATAR scores.

In 2011, 49 students received the top ATAR of 99.95, 30 males and 19 females, from a mix of government and independent schools.

#### 4.8 Gender differences

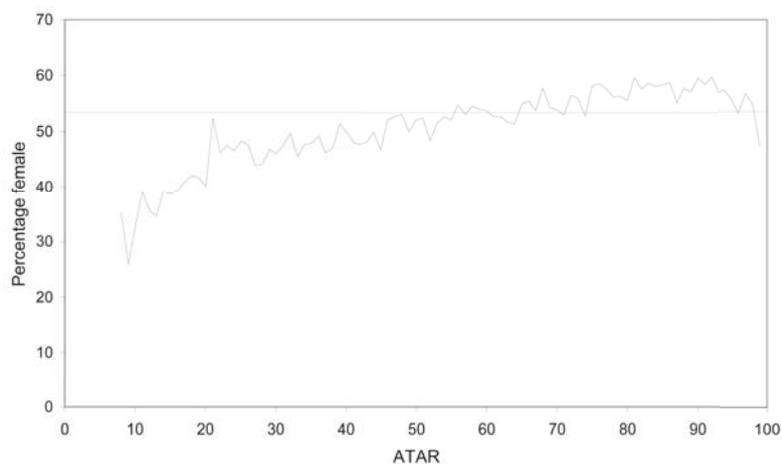
As in previous years, female students outperformed male students in the majority of courses and had a higher average ATAR. The percentages of students receiving ATARs on or above specified values who were female are given in Table 4.6.

**Table 4.6 Percentage of students receiving ATARs on or above specified values who were female: 2009–2011**

ATAR	2009 % female	2010 % female	2011 % female
99.00	50.2	49.7	47.1
98.00	50.4	51.9	50.9
95.00	54.2	54.5	53.4
90.00	55.9	56.0	55.9
80.00	57.1	56.4	56.7
70.00	56.7	56.0	56.4
60.00	55.9	55.5	55.9
50.00	55.3	54.8	55.3
40.00	54.6	54.2	54.7
30.00	54.2	53.6	54.2
<b>Total cohort</b>	<b>53.5</b>	<b>52.8</b>	<b>53.4</b>

Figure 4.1 shows the percentage of students on each ATAR who were female. For this graph the ATARs have been truncated, so that an ATAR of 90, for example, includes ATARs from 90.00 to 90.95. Overall 53.4% of the ATAR cohort was female, which is represented by the horizontal line on the graph. The graph shows clearly that there were proportionally more females on ATARs above 70.00 than males.

**Figure 4.1 Percentage of students on each ATAR who were female**



## 4.9 University offers

UAC makes several rounds of offers: first the October, November, December and Early January rounds, then the Main Round, which is followed by the Late and Final Rounds. In this report, *offer* refers to offers made in any of the rounds.

Of the 54,897 students who received an ATAR in 2011, 78.4% applied through UAC for a university course. Of the domestic (local) applicants 86.3% were made at least one offer of a place. Tables 4.7 and 4.8 provide a breakdown of applicants and offers by ATAR band. In Table 4.7 the percentage of applicants has increased in all bands from 2010 levels.

**Table 4.7 Applicants for university places by ATAR – domestic and international**

ATAR band	Total number of students	Applicants	
		Number	Percentage <sup>1</sup>
90.00 – 99.95	9,241	9,112	98.6
80.00 – 89.95	9,035	8,658	95.8
70.00 – 79.95	8,587	7,788	90.7
60.00 – 69.95	7,831	6,525	83.3
50.00 – 59.95	6,742	4,788	71.0
Below 50.00	13,461	6,147	45.7
<b>Total</b>	<b>54,897</b>	<b>43,018</b>	<b>78.4</b>

<sup>1</sup> These are percentages of the total number of students in the given ATAR band.

Not all the applicants have been ranked 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 4.8 Offers of university places by ATAR – domestic only**

ATAR band	Number of applicants	Offers	
		Number	Percentage <sup>2</sup>
90.00 – 99.95	8,860	8,851	99.9
80.00 – 89.95	8,425	8,408	99.8
70.00 – 79.95	7,607	7,541	99.1
60.00 – 69.95	6,377	6,089	95.5
50.00 – 59.95	4,669	3,501	75.0
Below 50.00	5,809	1,638	28.2
<b>Total</b>	<b>41,747</b>	<b>36,028</b>	<b>86.3</b>

<sup>2</sup> These are percentages of the number of applicants in the given ATAR band.

## 5 Trends and other issues

### 5.1 Variation in patterns of HSC marks – Tables A4, A5

A concern frequently raised by parents and students is that the observed variation in the patterns of HSC marks across different courses affects scaling and hence the ATAR calculation. 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 does not affect the ATAR calculation at all.

A related 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 also 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 2011 and 2010. 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 2011 and 2010. Table A5 provides similar information for scaled marks. The data show clearly that while the distributions of HSC marks have changed for some courses, the distributions of scaled marks were generally the same.

Textiles and Design is an example of a course where the candidature was almost the same as in 2010 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 Textiles and Design: 2010 and 2011, on a one-unit basis**

Mark	Year	Enrolment	Percentage of students with mark less than:				
			45	40	35	30	25
HSC mark	2011	2,325	88.0	61.4	30.3	11.1	3.0
	2010	2,268	85.6	53.7	27.7	9.9	2.3
Scaled mark	2011	2,325	99.6	95.2	85.8	73.4	57.8
	2010	2,268	99.2	94.8	85.6	73.9	59.3

Taken together, the data indicate that the 2011 candidature in Textiles and Design performed worse than the corresponding cohort in 2010 in terms of Textiles and Design. However their overall performance as judged by their scaled marks is very similar.

## 5.2 Distributions of English and Mathematics marks: 2008–2011

Because all students study English, and most study Mathematics, comparative data is shown for English and Mathematics courses for the four years, 2008 to 2011. Table 5.2 shows the distributions of HSC marks and Table 5.3 shows the distributions of scaled marks.

**Table 5.2 Distributions of HSC marks for English and Mathematics courses: 2008–2011**

	Year	Enrolment	Percentage of students with HSC mark less than:				
			45	40	35	30	25
English Standard	2011	34,384	99.8	91.1	60.9	27.4	6.9
	2010	34,371	99.8	95.7	64.9	27.8	8.3
	2009	32,454	99.8	94.6	63.8	22.5	7.2
	2008	32,191	99.8	94.0	61.9	20.6	5.8
English Advanced	2011	27,108	86.7	41.8	11.7	1.7	0.2
	2010	27,132	86.0	42.1	7.3	0.9	0.1
	2009	27,248	88.7	48.0	11.2	1.0	0.1
	2008	27,438	89.2	50.6	10.8	0.9	0.1
English Extension 1	2011	5,327	73.2	38.4	15.8	4.5	1.1
	2010	5,578	75.5	37.8	14.3	3.3	0.6
	2009	5,718	77.5	42.9	15.7	3.7	0.9
	2008	5,694	74.2	40.9	16.0	3.5	0.7
English Extension 2	2011	2,187	76.5	45.5	15.9	3.9	0.8
	2010	2,201	71.9	44.2	18.5	6.0	1.7
	2009	2,165	71.8	43.1	20.1	7.4	2.4
	2008	2,209	69.5	41.1	17.9	4.7	1.3
ESL	2011	2,869	94.2	67.4	30.6	7.9	1.3
	2010	3,079	96.3	74.3	35.0	10.4	2.6
	2009	3,248	97.3	78.2	43.8	14.4	2.9
	2008	2,837	96.7	71.8	40.1	14.1	4.2
General Mathematics	2011	31,631	92.9	75.5	49.6	19.6	6.3
	2010	30,992	93.4	73.7	43.0	14.0	2.8
	2009	29,909	94.1	75.1	45.4	18.4	6.6
	2008	29,977	95.2	74.1	43.7	17.2	6.1
Mathematics	2011	16,564	81.6	48.6	21.2	9.0	4.4
	2010	17,152	80.9	51.8	24.7	10.7	5.1
	2009	17,197	84.2	57.4	28.9	10.5	5.2
	2008	17,247	83.2	55.0	27.8	12.1	3.2
Mathematics Extension 1	2011	8,823	64.0	35.5	15.4	5.8	2.2
	2010	9,116	63.0	36.8	17.2	7.6	2.7
	2009	8,630	65.5	37.9	18.1	7.6	2.9
	2008	8,548	66.6	39.9	18.2	8.5	3.9
Mathematics Extension 2	2011	3,439	60.7	26.9	8.2	3.1	1.4
	2010	3,469	62.5	27.6	9.8	3.3	1.0
	2009	3,170	60.0	29.6	10.5	4.5	1.8
	2008	3,089	62.9	30.1	9.5	3.6	1.6

**Table 5.3 Distributions of scaled marks for English and Mathematics courses: 2008–2011**

	Year	Enrolment	Percentage of students with scaled mark less than:					
			45	40	35	30	25	20
English Standard	2011	34,384	99.9	99.5	97.4	91.6	79.3	59.9
	2010	34,371	99.9	99.7	98.4	94.0	83.4	64.4
	2009	32,454	99.9	99.6	97.7	92.3	80.1	61.1
	2008	32,191	99.9	99.5	97.7	91.9	80.1	61.0
English Advanced	2011	27,108	96.3	80.5	60.5	40.0	21.1	8.8
	2010	27,132	96.5	80.2	58.8	35.9	18.1	7.1
	2009	27,248	96.6	82.9	63.8	41.0	22.7	9.9
	2008	27,438	97.0	83.5	63.5	42.3	23.4	10.2
English Extension 1	2011	5,327	94.2	69.9	37.3	16.7	6.4	2.3
	2010	5,578	96.7	69.7	35.2	14.2	4.9	1.3
	2009	5,718	95.6	67.7	36.0	15.0	6.0	2.6
	2008	5,694	95.2	68.0	36.1	15.4	5.6	2.1
English Extension 2	2011	2,187	92.4	71.3	44.5	18.4	5.3	1.5
	2010	2,201	92.9	70.2	41.6	14.9	4.0	0.9
	2009	2,165	90.3	68.0	38.3	16.6	6.0	2.0
	2008	2,209	89.3	67.0	39.0	16.5	5.7	1.7
ESL	2011	2,869	98.8	94.1	85.7	73.5	60.3	46.5
	2010	3,079	98.5	93.2	84.9	73.5	58.8	44.5
	2009	3,248	99.4	95.0	86.4	76.0	61.9	48.3
	2008	2,837	98.6	93.2	85.0	73.3	59.4	45.7
General Mathematics	2011	31,631	99.9	97.4	89.1	77.4	63.6	47.8
	2010	30,992	99.9	98.3	90.0	77.6	63.0	47.4
	2009	29,909	99.9	98.0	90.3	77.8	63.0	47.2
	2008	29,977	99.9	98.1	90.3	77.9	62.5	46.4
Mathematics	2011	16,564	96.8	81.9	61.5	41.5	25.1	13.6
	2010	17,152	97.3	82.6	62.9	42.2	25.4	14.3
	2009	17,197	96.5	83.2	64.6	44.7	27.3	14.9
	2008	17,247	95.9	82.0	64.4	45.7	28.0	15.3
Mathematics Extension 1	2011	8,823	79.5	43.8	20.3	8.8	4.0	1.8
	2010	9,116	76.9	41.9	19.3	9.3	4.2	1.8
	2009	8,630	70.6	37.7	19.3	10.1	5.2	2.7
	2008	8,548	74.1	41.0	18.8	9.2	4.4	2.1
Mathematics Extension 2	2011	3,439	58.4	16.4	5.1	2.4	1.2	0.5
	2010	3,469	52.6	14.1	4.6	1.8	0.7	0.4
	2009	3,170	39.3	10.7	4.2	1.7	0.5	0.2
	2008	3,089	43.4	11.5	3.6	1.7	0.7	0.3

### 5.3 Courses that contribute to the ATAR – Table A6

There are three related questions regarding which courses contribute towards the ATAR.

- “Which courses will contribute to my ATAR?” which is normally asked in either Year 10 or Year 11 when students are choosing courses to study.
- “Why has this course contributed towards my ATAR rather than this other course?” which is asked when students receive their ATAR Advice Notices.
- “Do some groups of courses contribute to the ATAR less often than other groups of courses?”.

The first two questions are addressed in the next chapter of this report and in the *All About Your ATAR* booklet which is distributed to HSC students in December of each year and is available to download from UAC’s web site at [www.uac.edu.au](http://www.uac.edu.au)

The third question, whether some courses or groups of courses contribute towards the ATAR less often than other courses, is usually asked by teachers. This is not an easy question to answer, because not all students complete the same number of units. If students complete only 10 units all courses must be counted, whereas if students complete more than 10 units at least one unit *will* be omitted.

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 received an ATAR in 2011.
- The second column shows the number of students who completed more than 10 units.
- The third column expresses this number as a percentage.
- The final column gives the percentage of 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.

Of the 102 courses listed in Table A6, 67 have 70% 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.

### 5.4 ATAR percentiles and relationship between ATAR and aggregates – Tables A8, A9

A further question that is frequently raised concerns the relationship between the ATAR and the aggregate of scaled marks from which it is derived.

Table A8 in the Appendix shows the ATAR corresponding to selected ATAR-eligible percentiles. For example, 5% of the ATAR cohort in 2011 received an ATAR of 97.00 or above.

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

## 6 Frequently asked questions

Most of the enquiries from students received by the ATAR Enquiry Centre at UAC in 2011 concerned the relationship between their HSC marks and their ATARs, and the reason why one course contributed to their ATAR and not another. In this report, these two major enquiries will be discussed, along with the scaling of English. Following that, there is a summary of some of the other frequently asked questions.

### 6.1 Why is my ATAR low in comparison to my HSC marks?

The ATAR is a rank, not a mark and so there is no reason why the scores should be close. From Table A2 we can see that the median HSC mark for most 2 unit courses is between 70 and 80. The middle ATAR is 69.25 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, Nicole and Sarah, 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, 38.4 and 38.9 respectively, but their ATARs are quite different, 59.80 and 79.65 respectively.

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

Nicole			
ATAR	Course	HSC mark per course	HSC mark per unit
59.80	Design and Technology	77	38.5
	English Advanced	81	40.5
	General Mathematics	70	35.0
	Senior Science	77	38.5
	Visual Arts	79	39.5

Sarah			
ATAR	Course	HSC mark per course	HSC mark per unit
79.65	Biology	73	36.5
	Chemistry	77	38.5
	Economics	78	39.0
	English Advanced	81	40.5
	Mathematics	80	40.0

Both Nicole and Sarah 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 Nicole's courses was 23.5 whereas the average scaled mean for Sarah's courses was 30.6. Sarah has done better overall as she has competed against students of higher academic quality than Nicole. Consequently, her ATAR is higher.

### Example 2

Consider the following two students, Luke and Jack, whose HSC marks are shown in Table 6.2. Their average HSC marks per unit are the same, 39.4, but their ATARs are quite different, 65.05 and 75.00 respectively.

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

Luke			
ATAR	Course	HSC mark per course	HSC mark per unit
65.05	English Standard	75	37.5
	General Mathematics	75	37.5
	Modern History	76	38.0
	Music 1	83	41.5
	Information Technology Exam	85	42.5

Jack			
ATAR	Course	HSC mark per course	HSC mark per unit
75.00	English Advanced	78	39.0
	Geography	79	39.5
	Mathematics	83	41.5
	Music 2	81	40.5
	Physics	73	36.5

Jack has an ATAR that is close to his average HSC course score (78.8) whereas Luke's ATAR is much lower than his average HSC course score (78.8). If we look at Table A3 the average of the scaled means of the courses taken by Luke is 21.3 whereas for the courses taken by Jack the average of the scaled means is 30.5. This means that Jack has been competing against students of higher academic quality than Luke.

### Example 3

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

**Table 6.3 Two examples of student achievement: Fred and Laura**

Course	Fred		Laura	
	HSC mark per unit	Percentile	HSC mark per unit	Percentile
Biology	35.0	42	40.0	72
Business Studies	35.0	37	40.0	71
English Advanced	35.0	14	40.0	46
Mathematics	35.0	23	40.0	52
Modern History	35.0	27	40.0	59
Visual Arts	35.0	16	40.0	57
<b>ATAR</b>	<b>58.20</b>		<b>79.80</b>	

Their HSC marks per unit in each course differ by only 5, yet their ATARs differ by 21.6. 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 2010. While their HSC marks are the same the percentiles (their positions in their courses) have changed because of the changes in the distributions of HSC marks, so their ATARs are different. Table 6.4 presents the ATARs for 2009, 2010 and 2011.

**Table 6.4 ATARs for Fred and Laura: 2009–2011**

Year	Fred	Laura
2009	57.80	81.20
2010	57.05	80.15
2011	58.20	79.80

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

## 6.2 Why does this course contribute to my ATAR when another course where I received a higher mark does not count?

As in previous years, this question arose after the results were released because each student'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.

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

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

### Example 1 – scaled means

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

**Table 6.5 HSC and scaled marks – example 1**

Course	Number	Scaled mean	Scaled SD	P <sub>90</sub>	
				HSC mark per unit	Scaled mark
Ancient History	12,144	24.7	10.9	45.0	38.8
Biology	16,703	26.9	9.6	44.0	39.5
Business Studies	14,721	23.8	10.5	44.0	37.9
Music 1	4,997	21.8	10.3	45.5	36.3
Physics	9,382	30.7	9.6	44.5	42.4

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

A student in Biology with an HSC mark of 44 can receive a higher scaled mark than a student in Ancient History with an HSC mark of 45 due to the differences in the strength of the competition reflected in the scaled mean.

Notice also that the course with the highest HSC mark, Music 1, 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 47.0 per unit in Modern History and English Extension 2. The student in Modern History is at the 99th percentile and gains a scaled mark of 46.1 whereas the student in English Extension 2 is at the 90th percentile and gets a scaled mark of 44.4. Therefore, even though the scaled mean for English Extension 2, 35.9, is much higher than the scaled mean for Modern History, 27.3, the difference in position compensates for this and the Modern History student gets the higher scaled mark.

**Table 6.6 HSC and scaled marks – example 2**

	Scaled mean	Scaled SD	Percentile	HSC mark per unit	Scaled mark
English Extension 2	35.9	6.6	P <sub>90</sub>	47.0	44.4
Modern History	27.3	10.5	P <sub>99</sub>	47.0	46.1

### Example 3 – standard deviations

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

**Table 6.7 HSC and scaled marks – example 3**

Course	Scaled mean	Scaled SD	P <sub>90</sub>	
			HSC mark per unit	Scaled mark
History Extension	34.1	5.9	47.0	41.2
Chinese Continuers	31.8	10.7	47.0	43.6

Consider students at the 90th percentile of History Extension with HSC mark 47.0 per unit and scaled mark of 41.2 per unit and at the 90th percentile of Chinese Continuers with HSC mark of 47.0 and scaled mark of 43.6. Chinese Continuers has a scaled mean of 31.8 whereas History Extension has a scaled mean of 34.1.

The course with the lower scaled mean has the higher scaled mark corresponding to the HSC mark of 47.0, 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). Chinese Continuers has SD 10.7 but History Extension has SD 5.9. Chinese Continuers has a candidature with more varied academic ability than History 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 percentile, we see that candidates receiving an HSC mark of 50 in English Extension 2 received scaled marks of 50.0 and 49.2. The top HSC mark in a course does not necessarily reflect the top raw mark in a course and so a candidate with an HSC mark of 50 may not receive the top scaled mark.

Also looking at Music 2 we see the top HSC mark was 49.0 and the HSC mark corresponding to the 99th percentile was also 49.0. However, the top candidate received a scaled mark of 50.0 and the candidate at the 99th percentile of the scaled distribution received 49.1.

A similar observation can be made looking at the Italian Extension data at the 90th and 75th percentiles. 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 If English Standard and English Advanced are scaled as a single group, why does the same HSC mark give different scaled marks in English Standard and English Advanced?

HSC marks and scaled marks are different marks. HSC marks are the marks released by the Board to students and are the result of the standards-setting exercise. Scaled marks are, however, based on raw HSC marks.

- In 2 unit English all students complete a common paper (Paper 1) which counts for 40% of the total mark. Advanced and Standard students then complete separate papers that count for 60% of the total mark.
- The Board then 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 mark which is used for scaling is 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 for Standard and Advanced students. As a result, Advanced students on a given raw mark receive a higher aligned mark than Standard students on the same raw mark. Consequently, an aligned HSC mark corresponds to different scaled marks for Standard and Advanced students. This gives the appearance that Advanced students have been disadvantaged, but this is not true.

If Table A3 in the Appendix showed the raw HSC marks rather than the reported HSC marks, it would be clear that Advanced students are not disadvantaged in the scaling process.

### 6.4 Other frequently asked questions

#### Does the school I attend matter?

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

#### Does my postcode matter?

No.

#### Are certain courses always “scaled down”?

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

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

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

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

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

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

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

#### Can I find out what my scaled marks are?

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

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

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

### **Which course should I study?**

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

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

This is a common question. While the data show that students who study more units tend to gain higher ATARs, determining causality is difficult. The relationship between 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. 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 then 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

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The following courses are not included in Tables A1 – A6 in the Appendix as they had less than 10 students in 2011:

- Classical Greek Extension
- Dutch
- Hungarian
- Korean Continuers
- Malay Background Speakers
- Maltese
- Portuguese
- 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	Gender, ATAR eligibility and maximum ATAR by course <i>Excludes courses with less than 10 students.</i>
Table A2	Distributions of HSC marks by course <i>Excludes courses with less than 10 students.</i>
Table A3	Descriptive statistics and selected percentiles for HSC marks and scaled marks by course <i>Excludes courses with less than 10 ATAR-eligible students and no percentile data are given for courses with less than 40 students.</i>
Table A4	Distributions of HSC marks by course: 2010–2011 <i>Excludes courses with less than 40 students in either year.</i>
Table A5	Distributions of scaled marks by course: 2010–2011 <i>Excludes courses with less than 40 students in either year.</i>
Table A6	Courses that contribute to the ATAR <i>Excludes courses with less than 10 students.</i>
Table A7	ATAR distribution
Table A8	ATAR percentiles: 2009–2011
Table A9	Relationship between the ATAR and aggregates: 2009–2011

**Table A1 Gender, ATAR eligibility and maximum ATAR by course**

- Notes: (i) The **Number All** column includes students who have completed the course in 2011 or in a previous year (and who have done at least one ATAR course in 2011).
- (ii) The **Number HSC** column shows the number of students who completed the course in 2011 or in a previous year and received an HSC award in 2011.
- (iii) The **Number ATAR** column shows the number of students who completed the course in 2011 or in a previous year and who were eligible for an ATAR in 2011.
- (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 2011.
- (vi) The **% ATAR eligible** column shows the percentage of students in the course who were eligible for an ATAR in 2011.
- (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	376	347	219	76.1	92.3	58.2	98.50
Agriculture	1,363	1,320	1,055	51.3	96.8	77.4	99.95
Ancient History	12,298	12,060	11,208	59.0	98.1	91.1	99.95
Biology	16,960	16,665	16,200	61.2	98.3	95.5	99.95
Business Studies	14,899	14,552	13,561	49.0	97.7	91.0	99.95
Chemistry	11,131	10,929	10,904	45.0	98.2	98.0	99.95
Community and Family Studies	6,241	6,110	4,813	93.6	97.9	77.1	98.95
Dance	876	832	740	95.0	95.0	84.5	99.15
Design and Technology	3,448	3,385	2,979	45.5	98.2	86.4	99.35
Drama	4,840	4,759	4,279	72.1	98.3	88.4	99.95
Earth and Environmental Science	1,494	1,460	1,377	47.6	97.7	92.2	98.85
Economics	5,484	5,412	5,390	39.1	98.7	98.3	99.95
Engineering Studies	1,740	1,726	1,686	4.5	99.2	96.9	99.85
English Standard	34,736	33,709	25,563	48.4	97.0	73.6	99.55
English Advanced	27,363	27,034	26,758	58.6	98.8	97.8	99.95
English Extension 1	5,368	5,326	5,320	65.5	99.2	99.1	99.95
English Extension 2	2,192	2,176	2,176	67.4	99.3	99.3	99.95
ESL	2,895	2,798	2,575	49.6	96.6	88.9	99.95
Food Technology	3,861	3,787	3,090	74.7	98.1	80.0	99.75
Geography	4,482	4,384	4,054	46.7	97.8	90.5	99.95
Industrial Technology	4,619	4,487	3,135	9.9	97.1	67.9	96.65
Information Processes and Technology	4,453	4,124	3,753	26.3	92.6	84.3	99.95
Legal Studies	9,169	9,017	8,613	61.6	98.3	93.9	99.95
General Mathematics	31,917	31,293	26,867	50.7	98.0	84.2	99.65
Mathematics	16,861	15,825	15,772	46.4	93.9	93.5	99.95
Mathematics Extension 1	9,066	8,716	8,716	41.4	96.1	96.1	99.95
Mathematics Extension 2	3,501	3,436	3,437	36.0	98.1	98.2	99.95
Modern History	10,273	10,094	9,599	54.7	98.3	93.4	99.95
History Extension	2,074	2,062	2,062	63.9	99.4	99.4	99.95
Music 1	5,055	4,897	4,210	44.6	96.9	83.3	99.90
Music 2	770	739	736	52.2	96.0	95.6	99.95
Music Extension	476	468	467	52.1	98.3	98.1	99.95
PDH&PE	14,384	14,151	12,852	53.1	98.4	89.3	99.90
Physics	9,472	9,330	9,287	22.8	98.5	98.0	99.95

Table A1 Gender, ATAR eligibility and maximum ATAR by course (continued)

Course	Number All	Number HSC	Number ATAR	% Female	% HSC	% ATAR eligible	Maximum ATAR
Senior Science	5,437	5,321	4,454	47.3	97.9	81.9	99.20
Society and Culture	4,039	3,929	3,609	82.1	97.3	89.4	99.75
Software Design and Development	1,687	1,615	1,545	7.1	95.7	91.6	99.95
Studies of Religion I	9,554	9,382	8,997	53.7	98.2	94.2	99.95
Studies of Religion II	4,853	4,800	4,704	66.4	98.9	96.9	99.95
Textiles and Design	2,333	2,295	1,964	98.4	98.4	84.2	99.60
Visual Arts	9,808	9,586	8,272	71.2	97.7	84.3	99.95
Arabic Beginners	12	12	5	66.7	100.0	41.7	81.20
Arabic Continuers	236	222	185	68.6	94.1	78.4	97.90
Arabic Extension	65	60	56	61.5	92.3	86.2	91.75
Armenian	19	18	17	42.1	94.7	89.5	99.60
Chinese Beginners	27	27	27	59.3	100.0	100.0	95.95
Chinese Continuers	104	102	102	51.9	98.1	98.1	99.90
Chinese Extension	32	32	32	50.0	100.0	100.0	99.65
Chinese Background Speakers	944	912	902	53.5	96.6	95.6	99.85
Classical Greek Continuers	17	17	17	17.6	100.0	100.0	99.95
Classical Hebrew Continuers	28	28	28	71.4	100.0	100.0	99.95
Classical Hebrew Extension	17	17	17	64.7	100.0	100.0	99.95
Croatian	13	12	12	76.9	92.3	92.3	96.15
Filipino	34	29	28	50.0	85.3	82.4	91.95
French Beginners	627	617	561	82.0	98.4	89.5	99.30
French Continuers	884	834	828	71.3	94.3	93.7	99.95
French Extension	243	235	235	68.7	96.7	96.7	99.95
German Beginners	119	119	101	70.6	100.0	84.9	99.75
German Continuers	289	269	268	63.0	93.1	92.7	99.95
German Extension	84	80	80	60.7	95.2	95.2	99.95
Hindi	28	19	19	67.9	67.9	67.9	99.15
Indonesian Beginners	65	65	60	64.6	100.0	92.3	96.85
Indonesian Continuers	79	78	76	74.7	98.7	96.2	99.40
Indonesian Extension	21	21	21	66.7	100.0	100.0	99.40
Indonesian Background Speakers	104	89	89	56.7	85.6	85.6	99.15
Italian Beginners	372	367	337	75.3	98.7	90.6	99.85
Italian Continuers	288	271	260	74.0	94.1	90.3	99.85
Italian Extension	67	66	66	71.6	98.5	98.5	99.85
Japanese Beginners	533	530	522	62.3	99.4	97.9	99.55
Japanese Continuers	811	791	784	68.1	97.5	96.7	99.95
Japanese Extension	269	264	264	68.4	98.1	98.1	99.95
Japanese Background Speakers	32	32	32	50.0	100.0	100.0	99.75
Khmer	15	15	14	60.0	100.0	93.3	97.75
Korean Background Speakers	103	93	93	53.4	90.3	90.3	98.45
Latin Continuers	174	173	172	42.0	99.4	98.9	99.95
Latin Extension	102	102	102	38.2	100.0	100.0	99.95
Macedonian	19	18	17	68.4	94.7	89.5	96.65
Modern Greek Beginners	24	24	23	45.8	100.0	95.8	99.40
Modern Greek Continuers	119	106	98	60.5	89.1	82.4	99.50

Table A1 Gender, ATAR eligibility and maximum ATAR by course (continued)

Course	Number All	Number HSC	Number ATAR	% Female	% HSC	% ATAR eligible	Maximum ATAR
Modern Greek Extension	47	39	38	59.6	83.0	80.9	99.50
Modern Hebrew	55	42	42	81.8	76.4	76.4	99.95
Persian	52	42	35	59.6	80.8	67.3	96.75
Polish	46	45	45	63.0	97.8	97.8	96.80
Russian	26	24	23	69.2	92.3	88.5	96.55
Serbian	20	20	20	90.0	100.0	100.0	91.05
Spanish Beginners	184	178	164	67.9	96.7	89.1	99.90
Spanish Continuers	174	166	160	64.4	95.4	92.0	99.70
Spanish Extension	48	43	42	66.7	89.6	87.5	99.70
Swedish	16	5	5	50.0	31.3	31.3	96.65
Tamil	50	21	21	74.0	42.0	42.0	99.15
Turkish	56	52	48	62.5	92.9	85.7	98.05
Vietnamese	187	172	169	60.4	92.0	90.4	99.95
Accounting	444	443	412	49.5	99.8	92.8	99.90
Automotive Exam	356	320	146	7.9	89.9	41.0	83.15
Business Services Exam	1,444	1,374	1,076	80.2	95.2	74.5	95.85
Construction Exam	1,687	1,584	982	2.0	93.9	58.2	94.35
Electrotechnology Exam	227	205	138	1.8	90.3	60.8	95.00
Entertainment Industry Exam	883	859	749	50.8	97.3	84.8	96.80
Hospitality Exam	5,897	5,701	4,903	67.7	96.7	83.1	99.10
Information Technology Exam	1,527	1,433	1,196	18.7	93.8	78.3	98.40
Metal and Engineering Exam	758	720	374	3.0	95.0	49.3	88.75
Primary Industries Exam	680	625	415	43.1	91.9	61.0	98.70
Retail Services Exam	933	883	614	75.1	94.6	65.8	97.20
Tourism and Events Exam	355	349	273	91.8	98.3	76.9	97.40
<b>Total</b>	<b>69,309</b>	<b>64,663</b>	<b>54,897</b>	<b>52.0</b>	<b>93.3</b>	<b>79.2</b>	<b>99.95</b>

**Table A2 Distributions of HSC marks by course**

- Notes: (i) The **Median HSC mark** column shows the median HSC mark per course.  
(ii) The **Median Band** column indicates the Performance Band in which the median HSC mark lies.  
(iii) 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.  
(iv) The table excludes courses with less than 10 students.

Course	Number	Median HSC mark	Median Band	Percentage of students in Performance Band				
				6	5	4	3	2
Aboriginal Studies	361	74	4	7	27	30	21	9
Agriculture	1,291	70	4	7	18	26	28	16
Ancient History	12,144	75	4	10	27	28	20	9
Biology	16,703	73	4	8	23	30	27	11
Business Studies	14,721	74	4	7	25	33	22	10
Chemistry	10,965	77	4	11	29	32	19	6
Community and Family Studies	6,209	75	4	7	25	35	24	7
Dance	847	77	4	11	30	32	23	4
Design and Technology	3,401	77	4	9	30	39	17	5
Drama	4,770	78	4	11	32	38	16	2
Earth and Environmental Science	1,473	78	4	8	33	36	17	4
Economics	5,411	78	4	11	33	27	17	7
Engineering Studies	1,725	76	4	10	25	37	20	5
English Standard	34,384	66	3	<1	9	30	34	20
English Advanced	27,108	81	5	13	45	30	10	2
English Extension 1	5,327	41	E3			27	57	15
English Extension 2	2,187	40	E3			23	61	15
ESL	2,869	75	4	6	27	37	23	7
Food Technology	3,832	73	4	4	22	35	26	10
Geography	4,409	76	4	8	30	33	19	8
Industrial Technology	4,582	73	4	11	21	29	22	11
Information Processes and Technology	4,140	73	4	10	22	27	24	11
Legal Studies	9,087	76	4	10	29	30	20	8
General Mathematics	31,631	70	4	7	17	26	30	13
Mathematics	16,564	80	5	18	33	27	12	5
Mathematics Extension 1	8,823	42	E3			36	49	13
Mathematics Extension 2	3,439	87	E3			39	52	7
Modern History	10,143	78	4	10	36	29	16	5
History Extension	2,064	40	E3			26	49	23
Music 1	4,997	81	5	15	44	29	10	2
Music 2	736	87	5	33	51	15	1	
Music Extension	469	45	E4			60	39	1
PDH&PE	14,283	75	4	8	26	34	22	8
Physics	9,382	76	4	9	27	35	21	7
Senior Science	5,377	77	4	8	31	40	16	5
Society and Culture	3,975	75	4	8	25	33	26	6
Software Design and Development	1,634	71	4	6	20	29	30	12
Studies of Religion I	9,388	39	4	12	36	29	16	5
Studies of Religion II	4,791	79	4	9	39	29	16	5
Textiles and Design	2,325	76	4	12	27	31	19	8

Table A2 Distributions of HSC marks by course (continued)

Course	Number	Median HSC mark	Median Band	Percentage of students in Performance Band				
				6	5	4	3	2
Visual Arts	9,717	79	4	10	38	38	12	2
Arabic Beginners	10	70	4	10	20	20	10	20
Arabic Continuers	231	80	5	5	47	35	10	2
Arabic Extension	62	39	E3			8	68	24
Armenian	15	81	5	13	53	27	7	
Chinese Beginners	27	81	5	22	30	33	11	4
Chinese Continuers	100	89	5	46	31	14	7	2
Chinese Extension	30	46	E4			67	30	3
Chinese Background Speakers	941	82	5	12	47	31	9	1
Classical Greek Continuers	17	92	6	71	29			
Classical Hebrew Continuers	28	85	5	36	25	25	11	4
Classical Hebrew Extension	17	45	E4			59	41	
Croatian	13	78	4	23	23	46	8	
Filipino	34	86	5	26	41	15	12	6
French Beginners	623	78	4	18	25	31	12	10
French Continuers	833	84	5	30	34	23	10	2
French Extension	227	43	E3			44	41	13
German Beginners	118	75	4	19	22	17	18	9
German Continuers	272	81	5	18	36	24	18	3
German Extension	84	41	E3			27	64	8
Hindi	19	87	5	47	21	32		
Indonesian Beginners	65	78	4	17	28	23	18	6
Indonesian Continuers	77	84	5	31	29	21	13	4
Indonesian Extension	20	44	E3			45	40	5
Indonesian Background Speakers	104	73	4	2	16	41	21	13
Italian Beginners	369	73	4	14	21	25	22	11
Italian Continuers	273	80	5	22	31	29	15	1
Italian Extension	66	42	E3			36	62	2
Japanese Beginners	532	74	4	18	21	21	17	17
Japanese Continuers	798	81	5	24	29	22	16	6
Japanese Extension	269	41	E3			23	62	15
Japanese Background Speakers	30	78	4	7	37	43	13	
Khmer	13	84	5	23	46	23	8	
Korean Background Speakers	102	84	5	28	42	24	6	
Latin Continuers	170	89	5	46	33	15	5	1
Latin Extension	100	47	E4			80	18	2
Macedonian	19	84	5	16	47	32	5	
Modern Greek Beginners	23	90	6	57	30	9	4	
Modern Greek Continuers	106	83	5	24	35	21	18	3
Modern Greek Extension	44	44	E3			39	55	7
Modern Hebrew	41	91	6	66	32	2		
Persian	42	76	4	14	21	40	19	5
Polish	42	91	6	60	33	7		
Russian	23	90	6	52	26	9	13	
Serbian	19	86	5	16	68	5	11	

Table A2 Distributions of HSC marks by course (continued)

Course	Number	Median HSC mark	Median Band	Percentage of students in Performance Band				
				6	5	4	3	2
Spanish Beginners	183	77	4	16	27	27	15	13
Spanish Continuers	170	82	5	12	52	31	4	2
Spanish Extension	45	35	E3			9	51	40
Swedish	11	92	6	82	18			
Tamil	29	88	5	48	38	14		
Turkish	53	83	5	13	45	26	15	
Vietnamese	182	75	4	2	20	51	21	3
Accounting	438	80	5	14	38	25	13	5
Automotive Exam	341	73	4	2	19	43	31	5
Business Services Exam	1,417	72	4	2	21	37	27	10
Construction Exam	1,643	68	3	<1	9	36	34	18
Electrotechnology Exam	210	68	3	1	13	30	40	15
Entertainment Industry Exam	854	68	3	3	13	32	32	17
Hospitality Exam	5,806	76	4	9	30	36	22	3
Information Technology Exam	1,434	78	4	5	37	42	12	3
Metal and Engineering Exam	746	67	3	1	11	26	34	19
Primary Industries Exam	646	74	4	4	27	39	25	5
Retail Services Exam	907	75	4	<1	20	51	22	5
Tourism and Events Exam	353	78	4	4	39	42	12	3

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

- Notes: (i) The **P99, P90, P75, P50, P25** columns refer to the 99th, 90th, 75th, 50th and 25th percentiles respectively.
- (ii) The table excludes courses with less than 10 students and no percentile data are given for courses with less than 40 students.
- (iii) 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	361	HSC	36.5	6.7	49.0	48.0	44.0	41.0	37.0	33.0
		scaled	15.3	11.2	42.6	41.7	32.1	23.3	12.6	5.9
Agriculture	1,291	HSC	34.9	6.8	48.5	47.0	44.0	39.5	35.0	30.5
		scaled	20.4	10.8	46.3	43.5	35.8	28.2	19.7	11.2
Ancient History	12,144	HSC	36.7	7.0	50.0	48.0	45.0	42.0	37.5	32.5
		scaled	24.7	10.9	49.4	45.1	38.8	33.1	25.5	16.4
Biology	16,703	HSC	36.5	5.7	49.0	47.0	44.0	41.0	36.5	32.5
		scaled	26.9	9.6	49.7	45.2	39.5	34.4	27.4	19.8
Business Studies	14,721	HSC	36.7	5.9	49.5	47.0	44.0	41.0	37.0	33.0
		scaled	23.8	10.5	48.5	44.1	37.9	32.2	24.1	15.7
Chemistry	10,965	HSC	37.6	6.3	49.0	47.0	45.0	42.0	38.5	34.0
		scaled	31.6	9.3	50.0	46.2	42.4	38.7	33.3	25.7
Community and Family Studies	6,209	HSC	37.1	5.2	50.0	47.0	44.0	41.0	37.5	33.5
		scaled	19.6	10.5	43.8	39.8	34.1	28.0	19.3	10.8
Dance	847	HSC	38.2	5.3	50.0	48.5	45.0	42.0	38.5	34.5
		scaled	23.0	9.8	45.6	43.0	37.1	30.1	22.4	15.2
Design and Technology	3,401	HSC	38.1	4.9	49.0	47.5	44.5	41.5	38.5	35.0
		scaled	22.4	10.0	46.7	43.5	36.3	30.2	21.9	14.4
Drama	4,770	HSC	38.9	4.6	49.0	47.5	45.0	42.5	39.0	36.0
		scaled	24.1	10.4	49.3	46.1	38.2	31.8	23.9	16.2
Earth and Environmental Science	1,473	HSC	38.3	5.1	48.5	47.0	44.5	42.0	39.0	35.5
		scaled	23.9	9.9	47.5	43.8	37.0	31.1	24.2	16.9
Economics	5,411	HSC	37.3	7.3	49.0	47.5	45.0	42.5	39.0	34.0
		scaled	31.5	9.8	50.0	46.7	42.6	39.0	33.3	25.4
Engineering Studies	1,725	HSC	37.4	6.0	49.5	47.5	45.0	41.5	38.0	34.0
		scaled	25.6	9.3	48.0	43.9	38.0	32.6	25.9	19.1
English Standard	34,384	HSC	32.7	5.8	48.0	43.0	39.5	37.0	33.0	29.5
		scaled	18.1	8.3	47.3	38.1	29.1	23.7	17.9	11.9
English Advanced	27,108	HSC	40.2	4.3	49.5	47.5	45.0	43.5	40.5	37.5
		scaled	32.0	8.4	50.0	46.8	42.7	38.5	32.5	26.1
English Extension 1	5,327	HSC	40.3	5.6	50.0	49.0	46.0	45.0	41.0	37.0
		scaled	36.1	6.6	50.0	47.3	43.9	40.8	37.1	32.3
English Extension 2	2,187	HSC	39.9	5.5	50.0	50.0	47.0	44.0	40.0	36.0
		scaled	35.9	6.6	50.0	49.2	44.4	40.7	36.0	31.7
ESL	2,869	HSC	37.1	5.1	49.0	46.5	43.5	41.0	37.5	34.0
		scaled	21.6	11.4	49.4	45.0	37.2	30.5	21.4	12.3
Food Technology	3,832	HSC	36.1	5.4	49.0	47.0	43.0	40.0	36.5	32.5
		scaled	20.8	10.7	46.3	43.1	35.6	28.8	20.3	12.0
Geography	4,409	HSC	37.5	5.7	49.0	47.0	44.5	41.5	38.0	34.0
		scaled	25.4	10.3	50.0	45.3	39.0	33.2	25.7	17.8

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
Industrial Technology	4,582	HSC	36.0	7.2	50.0	48.5	45.0	41.0	36.5	32.0
		scaled	17.1	9.7	40.6	38.2	31.4	24.3	15.8	9.3
Information Processes and Technology	4,140	HSC	35.8	7.3	48.5	47.0	45.0	41.0	36.5	31.5
		scaled	21.5	10.6	46.9	43.1	35.7	29.6	21.4	13.2
Legal Studies	9,087	HSC	37.3	6.1	49.5	47.5	44.5	42.0	38.0	33.5
		scaled	25.4	10.7	50.0	45.6	39.3	33.9	25.7	17.2
General Mathematics	31,631	HSC	34.9	6.8	49.5	47.5	44.0	39.5	35.0	31.0
		scaled	21.2	10.1	45.4	41.7	35.4	29.1	20.7	13.1
Mathematics,	16,564	HSC	38.7	7.1	50.0	48.5	46.0	43.5	40.0	35.5
		scaled	30.9	9.5	50.0	46.8	42.3	38.3	32.2	24.9
Mathematics Extension 1	8,823	HSC	40.8	6.6	50.0	49.0	47.5	46.0	42.0	37.0
		scaled	39.5	6.8	50.0	48.8	46.6	44.4	40.9	36.3
Mathematics Extension 2	3,439	HSC	41.9	5.4	49.5	48.5	47.0	45.5	43.5	39.5
		scaled	43.2	4.8	50.0	49.1	47.4	46.2	44.3	41.5
Modern History	10,143	HSC	37.9	6.4	49.0	47.0	45.0	42.5	39.0	34.5
		scaled	27.3	10.5	50.0	46.1	40.2	35.1	28.7	20.3
History Extension	2,064	HSC	39.0	6.5	50.0	49.0	47.0	45.0	40.0	34.0
		scaled	34.1	5.9	48.9	45.9	41.2	38.2	34.6	30.4
Music 1	4,997	HSC	40.1	4.6	50.0	48.0	45.5	43.5	40.5	37.5
		scaled	21.8	10.3	47.0	43.9	36.3	29.3	21.3	13.9
Music 2	736	HSC	43.1	3.4	49.0	49.0	47.5	45.5	43.5	41.0
		scaled	33.7	8.3	50.0	49.1	44.8	39.9	33.9	27.8
Music Extension	469	HSC	44.8	4.1	50.0	50.0	50.0	48.0	45.0	42.0
		scaled	35.1	8.3	50.0	50.0	47.2	41.5	33.9	28.9
PDH&PE	14,283	HSC	37.2	5.7	49.5	47.5	44.5	41.5	37.5	33.5
		scaled	23.3	10.3	48.0	44.3	37.4	31.3	23.1	15.2
Physics	9,382	HSC	37.6	5.4	49.0	47.5	44.5	41.5	38.0	34.0
		scaled	30.7	9.6	50.0	46.9	42.4	38.2	31.8	24.2
Senior Science	5,377	HSC	38.2	5.0	49.5	48.0	44.5	41.5	38.5	35.5
		scaled	19.2	10.0	43.5	40.8	33.2	26.5	18.7	11.3
Society and Culture	3,975	HSC	37.2	5.5	49.0	47.5	44.5	41.0	37.5	33.5
		scaled	24.0	10.4	48.7	45.9	38.9	31.8	23.6	16.2
Software Design and Development	1,634	HSC	35.7	6.0	49.0	47.5	43.5	40.0	35.5	31.5
		scaled	24.4	10.2	47.6	43.4	37.6	32.6	25.0	16.3
Studies of Religion I	9,388	HSC	38.5	5.5	50.0	48.0	45.0	43.0	39.0	35.0
		scaled	27.6	8.6	47.8	43.8	38.4	33.9	28.3	21.7
Studies of Religion II	4,791	HSC	38.4	5.6	49.5	47.0	44.5	42.5	39.5	35.0
		scaled	27.8	9.4	49.8	45.5	39.3	34.9	28.7	21.5
Textiles and Design	2,325	HSC	37.5	6.3	49.5	48.0	45.0	42.0	38.0	33.5
		scaled	22.8	10.3	47.0	43.7	37.0	30.6	22.5	14.9
Visual Arts	9,717	HSC	39.3	4.4	49.5	47.5	45.0	42.5	39.5	36.5
		scaled	22.9	10.7	49.0	45.8	38.1	30.9	22.4	14.6
Arabic Beginners	10	HSC	32.1	10.8	47.5					
		scaled	12.2	9.0	32.2					

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
Arabic Continuers	231	HSC	39.3	4.3	46.5	46.0	44.0	42.5	40.0	37.0
		scaled	17.3	11.1	44.0	41.8	34.5	25.9	15.6	8.1
Arabic Extension	62	HSC	37.8	5.3	49.0	49.0	44.0	41.0	38.0	35.0
		scaled	24.0	6.8	39.8	39.8	32.3	28.0	24.4	19.9
Armenian	15	HSC	40.7	4.0	47.5					
		scaled	23.3	10.7	46.8					
Chinese Beginners	27	HSC	40.0	5.5	49.0					
		scaled	25.5	11.2	49.1					
Chinese Continuers	100	HSC	42.6	4.7	48.5	48.0	47.0	46.0	44.5	40.0
		scaled	31.8	10.7	50.0	48.7	43.6	40.0	35.0	22.9
Chinese Extension	30	HSC	44.3	3.5	48.0					
		scaled	35.6	9.1	50.0					
Chinese Background Speakers	941	HSC	40.3	4.0	48.5	47.0	45.0	43.5	41.0	37.5
		scaled	21.4	11.0	48.3	44.7	36.9	29.9	21.0	12.2
Classical Greek Continuers	17	HSC	46.1	2.8	49.5					
		scaled	40.1	7.8	50.0					
Classical Hebrew Continuers	28	HSC	40.8	5.8	48.5					
		scaled	37.4	8.3	50.0					
Classical Hebrew Extension	17	HSC	44.3	3.5	48.0					
		scaled	40.0	5.9	50.0					
Croatian	13	HSC	40.2	4.7	46.5					
		scaled	26.1	14.6	50.0					
Filipino	34	HSC	41.0	5.4	48.5					
		scaled	20.4	12.6	45.3					
French Beginners	623	HSC	38.0	7.2	49.5	48.5	46.5	43.0	39.0	34.5
		scaled	25.3	10.5	49.1	46.6	40.0	32.8	24.8	17.8
French Continuers	833	HSC	41.1	5.6	50.0	49.0	47.5	45.5	42.0	38.0
		scaled	34.7	8.7	50.0	48.6	44.9	41.4	36.4	29.6
French Extension	227	HSC	41.0	6.6	49.0	49.0	47.0	46.0	43.0	38.0
		scaled	40.5	6.2	50.0	48.8	46.6	45.3	42.3	37.7
German Beginners	118	HSC	35.4	9.7	50.0	49.0	46.0	43.0	37.5	30.0
		scaled	24.2	12.0	50.0	45.8	39.4	33.4	24.7	14.8
German Continuers	272	HSC	39.4	5.7	49.5	49.0	45.5	44.0	40.5	35.0
		scaled	34.0	8.1	50.0	48.6	43.1	40.1	34.9	28.9
German Extension	84	HSC	40.9	4.7	49.0	49.0	47.0	45.0	41.0	39.0
		scaled	39.6	4.4	50.0	50.0	45.3	42.3	39.1	37.5
Hindi	19	HSC	42.9	4.5	49.0					
		scaled	29.8	11.8	50.0					
Indonesian Beginners	65	HSC	37.1	8.3	48.5	48.5	46.0	43.5	39.0	33.0
		scaled	24.3	12.1	49.1	49.1	40.1	33.3	25.1	16.4
Indonesian Continuers	77	HSC	40.3	6.5	49.0	49.0	48.0	45.5	42.0	36.0
		scaled	30.5	10.7	50.0	50.0	44.6	38.8	31.7	23.4
Indonesian Extension	20	HSC	41.5	6.7	47.0					
		scaled	35.4	8.9	50.0					

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 Background Speakers	104	HSC	35.2	5.7	48.0	45.0	41.0	39.0	36.5	31.5
		scaled	26.9	10.1	50.0	45.6	39.2	33.5	28.8	20.2
Italian Beginners	369	HSC	36.1	7.8	49.0	48.5	45.5	42.0	36.5	31.5
		scaled	26.4	10.7	50.0	48.3	41.0	34.6	25.7	18.4
Italian Continuers	273	HSC	39.8	5.6	48.5	48.5	46.5	44.0	40.0	36.0
		scaled	30.8	10.0	50.0	49.1	43.0	38.5	31.5	24.0
Italian Extension	66	HSC	41.8	4.1	49.0	49.0	46.0	46.0	42.0	38.0
		scaled	39.5	4.1	50.0	50.0	44.1	42.9	39.2	36.2
Japanese Beginners	532	HSC	36.4	8.3	50.0	49.5	46.5	43.0	37.0	31.0
		scaled	23.7	11.4	47.9	45.7	38.9	32.6	23.4	15.0
Japanese Continuers	798	HSC	39.1	7.0	49.0	48.5	47.0	44.5	40.5	35.0
		scaled	31.4	10.0	50.0	47.1	43.2	39.3	33.0	24.5
Japanese Extension	269	HSC	40.1	5.1	48.0	48.0	46.0	44.0	41.0	37.0
		scaled	37.5	5.1	50.0	50.0	43.6	41.0	37.8	34.4
Japanese Background Speakers	30	HSC	38.9	3.5	46.5					
		scaled	23.6	9.4	46.2					
Khmer	13	HSC	41.6	3.7	46.5					
		scaled	13.0	13.4	42.7					
Korean Background Speakers	102	HSC	41.8	4.2	50.0	49.0	46.5	45.5	42.0	39.0
		scaled	25.2	11.1	50.0	47.4	39.6	34.2	25.0	16.4
Latin Continuers	170	HSC	43.3	4.6	49.5	49.5	48.0	47.0	44.5	40.5
		scaled	40.6	6.3	50.0	50.0	47.1	45.5	41.6	37.1
Latin Extension	100	HSC	46.0	3.7	50.0	50.0	49.0	48.0	47.0	45.0
		scaled	42.5	5.6	50.0	49.2	47.7	46.1	43.9	40.4
Macedonian	19	HSC	41.8	4.0	48.5					
		scaled	21.0	12.2	47.2					
Modern Greek Beginners	23	HSC	44.1	3.7	49.0					
		scaled	28.8	8.6	45.4					
Modern Greek Continuers	106	HSC	40.3	5.5	49.5	49.5	47.5	44.5	41.0	36.0
		scaled	24.9	11.2	50.0	50.0	41.6	32.9	24.0	16.0
Modern Greek Extension	44	HSC	42.4	4.8	48.0	48.0	48.0	46.0	44.0	39.0
		scaled	30.7	10.4	49.6	49.6	45.8	38.3	31.0	23.0
Modern Hebrew	41	HSC	45.5	2.6	49.5	49.5	48.5	47.0	45.5	44.5
		scaled	38.3	9.2	50.0	50.0	48.8	45.2	39.3	34.9
Persian	42	HSC	38.5	4.8	49.5	49.5	45.0	42.5	37.5	35.0
		scaled	15.0	11.1	41.5	41.5	32.7	23.6	11.5	6.2
Polish	42	HSC	45.1	2.8	49.5	49.5	48.5	47.5	45.0	44.0
		scaled	29.3	9.8	49.4	49.4	43.2	37.3	27.5	23.9
Russian	23	HSC	42.6	5.0	47.0					
		scaled	24.3	15.4	49.7					
Serbian	19	HSC	42.3	3.9	47.0					
		scaled	23.6	10.5	46.1					
Spanish Beginners	183	HSC	38.3	6.7	49.5	49.5	47.0	43.5	38.5	33.5
		scaled	24.5	12.2	50.0	49.8	41.4	33.6	23.8	15.1

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
Spanish Continuers	170	HSC	40.7	3.7	48.0	47.5	45.0	43.0	41.0	38.5
		scaled	24.6	10.6	48.4	47.7	38.4	31.7	24.8	16.5
Spanish Extension	45	HSC	36.5	5.1	48.0	48.0	44.0	40.0	35.0	32.0
		scaled	30.5	6.8	45.4	45.4	39.8	34.5	29.2	25.3
Turkish	53	HSC	40.0	4.4	46.5	46.5	45.5	43.0	41.5	37.0
		scaled	19.3	12.1	46.2	46.2	40.1	26.3	17.9	8.8
Vietnamese	182	HSC	36.6	4.7	46.0	45.5	41.5	39.5	37.0	34.5
		scaled	20.9	11.3	48.7	48.1	37.2	28.7	20.1	12.1
Accounting	438	HSC	38.8	7.0	49.0	48.5	46.0	44.0	40.0	35.5
		scaled	29.1	11.8	50.0	48.0	43.3	38.6	30.0	21.4
Automotive Exam	341	HSC	36.3	3.9	47.0	45.0	41.5	39.5	36.5	33.0
		scaled	13.3	8.5	34.2	33.0	26.4	20.1	12.2	5.7
Business Services Exam	1,417	HSC	35.5	5.6	47.5	45.5	42.0	39.5	36.0	32.5
		scaled	18.0	9.7	41.7	39.2	31.7	25.3	16.8	10.6
Construction Exam	1,643	HSC	33.6	5.0	45.5	42.0	39.5	37.0	34.0	30.5
		scaled	15.8	9.6	39.4	35.5	29.9	23.0	15.3	7.6
Electrotechnology Exam	210	HSC	34.4	4.4	45.5	44.5	40.5	37.5	34.0	31.0
		scaled	18.8	8.2	38.6	37.5	31.0	24.4	17.4	12.3
Entertainment Industry Exam	854	HSC	34.2	5.6	46.5	46.0	41.5	38.0	34.0	30.5
		scaled	21.6	9.4	43.9	42.4	34.8	28.1	20.9	14.6
Hospitality Exam	5,806	HSC	38.2	4.6	49.5	47.0	44.5	41.5	38.0	34.5
		scaled	19.9	9.9	44.1	40.4	33.9	27.7	19.6	11.9
Information Technology Exam	1,434	HSC	38.6	4.4	48.5	46.5	43.5	42.0	39.0	36.0
		scaled	18.3	9.6	41.4	38.2	31.0	26.3	17.5	10.6
Metal and Engineering Exam	746	HSC	32.7	6.7	48.0	45.0	40.5	37.0	33.5	29.0
		scaled	15.0	9.1	37.4	35.3	27.9	21.5	14.3	7.2
Primary Industries Exam	646	HSC	37.1	4.5	47.5	46.5	43.0	40.5	37.0	34.0
		scaled	16.9	9.6	40.4	39.4	31.3	24.4	15.3	9.1
Retail Services Exam	907	HSC	36.5	4.1	46.0	43.5	41.5	39.0	37.5	34.0
		scaled	16.7	10.1	41.3	37.6	31.9	23.7	16.7	8.2
Tourism and Events Exam	353	HSC	38.8	3.9	47.5	46.5	44.0	41.0	39.0	36.5
		scaled	21.2	9.3	43.6	41.8	35.4	26.8	20.8	14.0

**Table A4 Distributions of HSC marks by course: 2010–2011**

- Notes: (i) Columns **45, 40, 35, 30 and 25** show the percentage of the course candidature with an HSC mark less than the specified mark.
- (ii) 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	2011	361	92.8	65.7	35.5	14.4	5.8
	2010	339	90.9	62.2	34.5	12.4	4.7
Agriculture	2011	1,291	92.9	75.3	49.0	21.3	5.7
	2010	1,413	91.2	71.5	47.3	21.0	6.6
Ancient History	2011	12,144	89.8	62.4	34.5	14.7	5.5
	2010	12,086	88.9	61.5	35.2	14.8	5.5
Biology	2011	16,703	92.1	68.9	39.0	12.4	1.6
	2010	15,849	92.6	66.5	35.0	9.9	1.6
Business Studies	2011	14,721	92.9	67.8	34.3	12.5	2.8
	2010	15,830	90.4	62.8	32.2	9.4	2.0
Chemistry	2011	10,965	88.9	59.8	27.8	9.1	3.4
	2010	10,330	89.8	60.4	28.4	10.4	3.9
Community and Family Studies	2011	6,209	93.3	68.0	32.7	8.4	0.9
	2010	5,738	95.3	71.4	35.3	10.7	2.4
Dance	2011	847	89.1	59.4	27.0	4.3	0.7
	2010	801	88.8	66.0	30.1	4.2	0.9
Design and Technology	2011	3,401	91.4	61.6	22.8	5.6	0.7
	2010	3,599	91.7	65.8	24.8	4.1	0.4
Drama	2011	4,770	88.6	56.5	18.1	2.3	0.2
	2010	4,492	89.4	60.2	21.7	3.5	0.4
Earth and Environmental Science	2011	1,473	91.6	58.8	22.8	5.6	1.6
	2010	1,449	92.5	57.6	21.5	4.9	1.2
Economics	2011	5,411	89.2	56.4	29.3	12.8	5.6
	2010	6,108	86.7	58.6	32.1	15.1	7.1
Engineering Studies	2011	1,725	89.7	64.7	27.9	7.7	2.6
	2010	1,818	92.0	60.9	23.5	8.5	2.4
English Standard	2011	34,384	99.8	91.1	60.9	27.4	6.9
	2010	34,371	99.8	95.7	64.9	27.8	8.3
English Advanced	2011	27,108	86.7	41.8	11.7	1.7	0.2
	2010	27,132	86.0	42.1	7.3	0.9	0.1
English Extension 1	2011	5,327	73.2	38.4	15.8	4.5	1.1
	2010	5,578	75.5	37.8	14.3	3.3	0.6
English Extension 2	2011	2,187	76.5	45.5	15.9	3.9	0.8
	2010	2,201	71.9	44.2	18.5	6.0	1.7
ESL	2011	2,869	94.2	67.4	30.6	7.9	1.3
	2010	3,079	96.3	74.3	35.0	10.4	2.6
Food Technology	2011	3,832	95.7	74.1	38.6	12.2	2.1
	2010	3,500	92.8	69.9	41.9	19.2	6.9
Geography	2011	4,409	91.6	62.1	28.6	9.6	1.9
	2010	4,600	91.2	61.5	26.8	7.7	1.3
Industrial Technology	2011	4,582	89.1	68.5	39.5	17.5	6.2
	2010	4,061	90.5	69.4	40.5	18.3	6.8

Table A4 Distributions of HSC marks by course: 2010–2011 (continued)

Course	Year	Number	Percentage of students with HSC mark less than:				
			45	40	35	30	25
Information Processes and Technology	2011	4,140	89.8	67.9	41.2	17.5	6.2
	2010	4,657	90.2	65.5	34.3	11.8	3.9
Legal Studies	2011	9,087	90.2	61.1	31.3	11.2	2.9
	2010	8,644	88.4	62.0	35.9	16.6	5.5
General Mathematics	2011	31,631	92.9	75.5	49.6	19.6	6.3
	2010	30,992	93.4	73.7	43.0	14.0	2.8
Mathematics	2011	16,564	81.6	48.6	21.2	9.0	4.4
	2010	17,152	80.9	51.8	24.7	10.7	5.1
Mathematics Extension 1	2011	8,823	64.0	35.5	15.4	5.8	2.2
	2010	9,116	63.0	36.8	17.2	7.6	2.7
Mathematics Extension 2	2011	3,439	60.7	26.9	8.2	3.1	1.4
	2010	3,469	62.5	27.6	9.8	3.3	1.0
Modern History	2011	10,143	90.0	54.5	25.3	9.6	4.2
	2010	10,054	91.9	58.1	22.3	8.6	3.4
History Extension	2011	2,064	74.4	48.2	25.7	8.2	2.2
	2010	2,191	76.8	53.4	29.0	11.3	3.3
Music 1	2011	4,997	84.8	40.8	12.1	2.6	0.5
	2010	4,995	83.9	39.5	12.1	1.9	0.5
Music 2	2011	736	66.8	16.0	1.0	0.0	
	2010	747	67.7	17.7	1.1	0.3	0.0
Music Extension	2011	469	39.7	11.3	1.1	0.2	0.0
	2010	447	40.9	9.4	1.1	0.2	0.0
PDH&PE	2011	14,283	91.8	65.6	31.9	9.7	2.1
	2010	13,496	91.0	61.4	29.3	6.5	1.2
Physics	2011	9,382	91.0	63.7	28.8	8.0	1.2
	2010	9,359	91.6	60.7	28.6	7.2	2.1
Senior Science	2011	5,377	91.9	60.9	21.4	5.8	1.0
	2010	4,901	91.9	60.0	24.3	6.1	1.0
Society and Culture	2011	3,975	91.6	66.6	33.5	8.0	1.5
	2010	3,961	91.5	66.5	34.9	10.3	1.7
Software Design and Development	2011	1,634	93.8	73.8	44.5	14.9	2.9
	2010	1,760	91.5	72.3	39.3	13.6	2.4
Studies of Religion I	2011	9,388	87.8	51.5	22.5	6.1	1.5
	2010	9,538	86.1	48.8	21.0	5.2	0.9
Studies of Religion II	2011	4,791	91.3	52.2	23.5	7.6	2.1
	2010	4,468	90.5	50.6	23.0	7.9	1.7
Textiles and Design	2011	2,325	88.0	61.4	30.3	11.1	3.0
	2010	2,268	85.6	53.7	27.7	9.9	2.3
Visual Arts	2011	9,717	89.9	52.0	14.0	2.3	0.3
	2010	9,600	88.3	49.3	12.7	1.7	0.2
Arabic Continuers	2011	231	94.8	47.6	13.0	2.6	0.9
	2010	223	96.4	61.4	22.4	4.5	0.0
Arabic Extension	2011	62	91.9	56.5	24.2	9.7	0.0
	2010	65	92.3	73.8	29.2	7.7	0.0

Table A4 Distributions of HSC marks by course: 2010–2011 (continued)

Course	Year	Number	Percentage of students with HSC mark less than:				
			45	40	35	30	25
Chinese Continuers	2011	100	54.0	23.0	9.0	2.0	0.0
	2010	118	56.8	13.6	7.6	0.0	
Chinese Background Speakers	2011	941	87.7	41.0	9.6	0.9	0.2
	2010	1,102	88.5	37.2	8.0	1.0	0.2
French Beginners	2011	623	82.3	57.0	26.2	13.8	3.7
	2010	664	81.2	55.1	27.6	15.5	5.6
French Continuers	2011	833	70.3	36.1	13.3	3.2	1.1
	2010	881	73.2	40.2	14.2	4.2	1.1
French Extension	2011	227	56.4	32.2	15.4	8.8	2.6
	2010	220	54.1	24.1	9.5	2.3	0.0
German Beginners	2011	118	80.5	58.5	41.5	23.7	14.4
	2010	97	79.4	54.6	29.9	11.3	4.1
German Continuers	2011	272	81.6	46.0	22.4	4.8	1.5
	2010	338	76.3	45.0	22.2	5.6	0.9
German Extension	2011	84	72.6	31.0	8.3	1.2	0.0
	2010	93	68.8	40.9	14.0	3.2	2.2
Indonesian Beginners	2011	65	83.1	55.4	32.3	13.8	7.7
	2010	53	79.2	52.8	34.0	7.5	0.0
Indonesian Continuers	2011	77	68.8	40.3	19.5	6.5	2.6
	2010	69	66.7	33.3	10.1	2.9	0.0
Indonesian Background Speakers	2011	104	98.1	81.7	40.4	19.2	5.8
	2010	109	99.1	67.9	19.3	4.6	0.9
Italian Beginners	2011	369	85.6	64.2	39.0	17.3	6.0
	2010	357	83.5	63.9	35.6	16.2	6.2
Italian Continuers	2011	273	78.0	47.3	18.3	2.9	1.5
	2010	320	77.2	49.7	21.6	6.3	2.2
Italian Extension	2011	66	63.6	30.3	1.5	0.0	
	2010	60	66.7	35.0	6.7	0.0	
Japanese Beginners	2011	532	82.0	60.5	39.7	22.2	5.1
	2010	663	82.5	56.1	32.0	14.5	5.1
Japanese Continuers	2011	798	75.6	46.6	24.9	9.3	3.4
	2010	781	79.1	51.9	23.2	6.5	1.2
Japanese Extension	2011	269	76.6	39.4	14.9	4.1	0.0
	2010	285	74.0	40.4	17.9	6.0	1.1
Korean Background Speakers	2011	102	71.6	29.4	5.9	0.0	
	2010	88	76.1	28.4	5.7	0.0	
Latin Continuers	2011	170	53.5	20.6	5.9	1.2	0.0
	2010	176	46.0	19.3	4.5	0.0	
Latin Extension	2011	100	20.0	5.0	2.0	2.0	0.0
	2010	97	22.7	3.1	0.0		
Modern Greek Continuers	2011	106	76.4	41.5	20.8	2.8	0.0
	2010	97	78.4	49.5	20.6	3.1	0.0
Modern Hebrew	2011	41	34.1	2.4	0.0		
	2010	45	53.3	0.0			

Table A4 Distributions of HSC marks by course: 2010–2011 (continued)

Course	Year	Number	Percentage of students with HSC mark less than:				
			45	40	35	30	25
Persian	2011	42	85.7	64.3	23.8	4.8	0.0
	2010	45	62.2	35.6	11.1	4.4	0.0
Spanish Beginners	2011	183	83.6	56.3	29.0	14.2	1.1
	2010	213	85.0	63.4	30.0	15.0	1.9
Spanish Continuers	2011	170	88.2	35.9	5.3	1.8	0.0
	2010	166	81.3	44.0	10.2	0.0	
Spanish Extension	2011	45	91.1	73.3	40.0	2.2	0.0
	2010	46	93.5	63.0	28.3	0.0	
Vietnamese	2011	182	98.4	78.0	27.5	6.6	3.3
	2010	181	97.8	71.3	26.0	6.6	2.8
Accounting	2011	438	85.6	47.5	22.8	9.6	4.3
	2010	530	85.8	53.6	32.1	18.5	9.1
Automotive Exam	2011	341	97.9	78.9	36.1	4.7	0.0
	2010	282	100.0	83.3	42.6	5.0	1.1
Business Services Exam	2011	1,417	97.8	76.8	39.9	13.1	3.3
	2010	1,462	95.9	77.6	36.0	8.7	1.9
Construction Exam	2011	1,643	99.9	91.3	55.3	20.9	2.5
	2010	1,536	98.9	78.9	31.5	8.1	0.5
Electrotechnology Exam	2011	210	99.0	85.7	56.2	15.7	0.5
	2010	172	95.3	66.9	35.5	9.3	0.6
Entertainment Industry Exam	2011	854	97.3	84.7	52.9	20.5	3.3
	2010	828	95.7	77.1	33.1	5.4	0.5
Hospitality Exam	2011	5,806	91.5	61.9	25.4	2.9	0.3
	2010	5,150	94.3	64.2	24.2	6.4	0.9
Information Technology Exam	2011	1,434	95.1	58.0	16.0	3.8	0.6
	2010	1,598	98.1	77.7	33.9	10.8	1.1
Metal and Engineering Exam	2011	746	98.7	87.9	62.2	27.9	8.6
	2010	671	97.6	81.7	43.1	14.8	4.2
Primary Industries Exam	2011	646	96.4	69.5	30.5	5.3	0.3
	2010	578	97.2	81.3	26.8	4.7	0.0
Retail Services Exam	2011	907	99.6	79.7	28.4	6.0	0.8
	2010	954	98.8	78.6	30.1	4.4	0.6
Tourism and Events Exam	2011	353	95.8	56.4	14.4	2.8	0.3
	2010	349	95.7	65.0	26.4	6.0	0.6

**Table A5 Distributions of scaled marks by course: 2010–2011**

- Notes: (i) 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.
- (ii) 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	2011	361	100.0	98.3	93.4	85.9	79.5	67.9	54.8
	2010	339	100.0	95.0	92.6	85.3	76.1	68.7	57.2
Agriculture	2011	1,291	99.8	95.7	88.1	78.6	65.8	50.9	34.8
	2010	1,413	98.8	94.1	87.0	77.4	65.3	52.7	35.5
Ancient History	2011	12,144	99.0	92.4	81.0	64.9	48.3	33.6	21.7
	2010	12,086	98.7	92.8	81.1	65.7	49.4	33.8	20.5
Biology	2011	16,703	98.8	91.1	77.0	59.4	41.6	25.5	12.6
	2010	15,849	99.1	91.9	77.2	58.4	40.3	24.8	13.2
Business Studies	2011	14,721	99.4	94.0	83.2	68.6	53.0	37.7	23.2
	2010	15,830	99.7	94.9	83.9	69.3	53.3	38.0	23.9
Chemistry	2011	10,965	97.2	80.6	57.4	37.7	23.1	12.7	6.3
	2010	10,330	97.9	80.6	56.6	36.4	22.1	12.4	6.3
Community and Family Studies	2011	6,209	100.0	99.0	91.8	80.2	66.9	52.1	36.4
	2010	5,738	100.0	98.3	92.4	82.3	68.8	52.6	35.3
Dance	2011	847	99.8	95.0	85.6	74.5	59.0	42.5	24.2
	2010	801	99.9	94.1	86.0	75.5	60.5	41.3	21.8
Design and Technology	2011	3,401	99.7	95.5	87.3	74.6	59.9	43.8	26.8
	2010	3,599	99.6	95.4	87.9	76.7	63.5	47.5	29.4
Drama	2011	4,770	98.2	92.6	83.2	69.2	53.3	36.6	21.4
	2010	4,492	98.6	92.9	83.5	69.7	52.1	34.7	20.2
Earth and Environmental Science	2011	1,473	99.5	95.5	85.3	71.1	53.6	35.0	20.6
	2010	1,449	99.4	95.6	83.4	65.9	48.2	30.3	17.9
Economics	2011	5,411	96.7	80.0	57.5	37.6	23.7	13.9	7.5
	2010	6,108	97.9	82.3	59.8	39.2	24.2	14.5	8.1
Engineering Studies	2011	1,725	99.7	94.4	82.5	66.0	46.4	27.8	14.1
	2010	1,818	99.4	96.0	84.1	66.2	46.1	27.6	13.9
English Standard	2011	34,384	99.9	99.5	97.4	91.6	79.3	59.9	36.9
	2010	34,371	99.9	99.7	98.4	94.0	83.4	64.4	40.6
English Advanced	2011	27,108	96.3	80.5	60.5	40.0	21.1	8.8	2.7
	2010	27,132	96.5	80.2	58.8	35.9	18.1	7.1	2.0
English Extension 1	2011	5,327	94.2	69.9	37.3	16.7	6.4	2.3	0.7
	2010	5,578	96.7	69.7	35.2	14.2	4.9	1.3	0.3
English Extension 2	2011	2,187	92.4	71.3	44.5	18.4	5.3	1.5	0.3
	2010	2,201	92.9	70.2	41.6	14.9	4.0	0.9	0.2
ESL	2011	2,869	98.8	94.1	85.7	73.5	60.3	46.5	32.2
	2010	3,079	98.5	93.2	84.9	73.5	58.8	44.5	30.3
Food Technology	2011	3,832	99.8	95.9	88.4	77.7	64.3	49.4	34.2
	2010	3,500	99.9	96.9	89.5	78.5	65.7	51.5	35.7
Geography	2011	4,409	98.9	92.0	79.5	64.9	47.6	31.1	18.1
	2010	4,600	98.5	91.7	79.7	64.8	46.4	30.8	17.8
Industrial Technology	2011	4,582	100.0	99.9	95.6	87.5	76.8	63.5	46.7
	2010	4,061	100.0	99.9	96.5	88.6	78.4	65.2	48.6

Table A5 Distributions of scaled marks by course: 2010–2011 (continued)

Course	Year	Number	Percentage of students with scaled mark less than:						
			45	40	35	30	25	20	15
Information Processes and Technology	2011	4,140	99.7	96.7	88.3	76.0	61.1	45.4	29.7
	2010	4,657	99.7	96.1	87.2	74.3	59.1	44.4	28.5
Legal Studies	2011	9,087	98.5	91.4	78.1	63.0	47.9	32.3	20.0
	2010	8,644	98.7	90.5	78.1	63.2	47.1	32.5	20.5
General Mathematics	2011	31,631	99.9	97.4	89.1	77.4	63.6	47.8	31.2
	2010	30,992	99.9	98.3	90.0	77.6	63.0	47.4	31.5
Mathematics	2011	16,564	96.8	81.9	61.5	41.5	25.1	13.6	7.1
	2010	17,152	97.3	82.6	62.9	42.2	25.4	14.3	7.2
Mathematics Extension 1	2011	8,823	79.5	43.8	20.3	8.8	4.0	1.8	0.9
	2010	9,116	76.9	41.9	19.3	9.3	4.2	1.8	0.7
Mathematics Extension 2	2011	3,439	58.4	16.4	5.1	2.4	1.2	0.5	0.3
	2010	3,469	52.6	14.1	4.6	1.8	0.7	0.4	0.2
Modern History	2011	10,143	98.0	89.5	74.8	55.3	37.6	24.5	14.7
	2010	10,054	98.7	90.7	74.4	55.2	37.5	24.3	14.6
History Extension	2011	2,064	98.8	84.6	52.9	23.4	6.9	1.8	0.5
	2010	2,191	97.4	80.1	50.8	22.5	7.4	2.1	0.7
Music 1	2011	4,997	99.6	95.2	87.7	76.2	63.0	45.0	28.1
	2010	4,995	99.6	95.2	87.0	75.5	60.6	43.0	25.5
Music 2	2011	736	90.6	75.5	54.5	32.9	15.2	6.3	1.0
	2010	747	94.2	77.2	54.9	30.5	15.9	5.1	0.9
Music Extension	2011	469	83.6	68.2	52.7	29.6	11.7	1.7	0.2
	2010	447	85.0	73.8	55.0	24.8	6.9	1.1	0.2
PDH&PE	2011	14,283	99.5	94.7	84.6	71.6	56.1	40.0	24.4
	2010	13,496	99.7	95.7	85.9	71.7	55.4	39.2	24.5
Physics	2011	9,382	96.4	81.9	62.2	43.2	27.3	15.5	7.4
	2010	9,359	98.3	85.3	63.5	42.2	26.1	15.1	7.5
Senior Science	2011	5,377	100.0	98.5	93.0	83.4	70.8	55.0	37.4
	2010	4,901	100.0	98.7	93.4	83.8	68.6	51.9	36.0
Society and Culture	2011	3,975	98.5	92.2	82.6	70.5	54.7	37.9	21.5
	2010	3,961	98.8	93.3	83.5	71.0	55.5	38.8	22.5
Software Design and Development	2011	1,634	99.6	95.3	82.6	66.0	50.1	34.4	22.2
	2010	1,760	99.4	94.5	83.8	67.8	48.7	34.1	19.1
Studies of Religion I	2011	9,388	99.6	93.7	78.9	57.5	36.4	19.9	9.0
	2010	9,538	99.7	94.3	78.8	58.8	37.3	20.9	9.6
Studies of Religion II	2011	4,791	98.9	91.8	75.4	55.3	35.8	21.1	11.1
	2010	4,468	98.5	90.6	75.4	55.8	37.4	22.9	12.9
Textiles and Design	2011	2,325	99.6	95.2	85.8	73.4	57.8	40.9	25.2
	2010	2,268	99.2	94.8	85.6	73.9	59.3	42.8	27.5
Visual Arts	2011	9,717	98.6	93.0	84.0	72.8	58.4	42.4	26.0
	2010	9,600	98.4	93.3	84.5	72.3	57.2	41.8	25.0
Arabic Continuers	2011	231	100.0	97.0	90.9	83.1	74.0	63.2	48.5
	2010	223	100.0	97.3	93.3	84.8	70.0	58.7	42.2
Arabic Extension	2011	62		100.0	96.8	80.6	51.6	27.4	11.3
	2010	65	100.0	96.9	89.2	75.4	52.3	15.4	6.2

Table A5 Distributions of scaled marks by course: 2010–2011 (continued)

Course	Year	Number	Percentage of students with scaled mark less than:						
			45	40	35	30	25	20	15
Chinese Continuers	2011	100	96.0	75.0	49.0	40.0	28.0	17.0	7.0
	2010	118	94.9	75.4	51.7	36.4	22.9	11.9	9.3
Chinese Background Speakers	2011	941	99.0	94.7	87.8	75.0	62.3	48.0	34.2
	2010	1,102	98.2	94.6	87.4	74.7	61.5	46.1	30.6
French Beginners	2011	623	97.3	90.0	80.4	65.8	50.2	32.6	19.1
	2010	664	97.9	92.3	80.3	64.6	45.9	28.8	18.4
French Continuers	2011	833	90.3	67.9	45.0	26.8	14.6	7.4	1.9
	2010	881	91.6	68.1	44.9	26.3	14.4	5.8	2.7
French Extension	2011	227	70.9	36.6	15.9	9.3	2.2	0.4	0.4
	2010	220	76.4	40.0	15.5	5.0	1.4	0.0	
German Beginners	2011	118	98.3	92.4	78.0	60.2	50.0	40.7	25.4
	2010	97	95.9	85.6	69.1	53.6	37.1	23.7	9.3
German Continuers	2011	272	94.5	74.3	50.4	28.3	14.7	5.5	1.8
	2010	338	92.0	73.1	51.2	34.3	20.1	7.7	4.1
German Extension	2011	84	88.1	59.5	13.1	1.2	0.0		
	2010	93	90.3	59.1	16.1	2.2	2.2	0.0	
Indonesian Beginners	2011	65	92.3	87.7	75.4	70.8	49.2	38.5	21.5
	2010	53	98.1	86.8	71.7	62.3	50.9	30.2	13.2
Indonesian Continuers	2011	77	92.2	80.5	64.9	44.2	28.6	16.9	7.8
	2010	69	92.8	81.2	53.6	37.7	20.3	10.1	2.9
Indonesian Background Speakers	2011	104	98.1	90.4	81.7	54.8	41.3	22.1	15.4
	2010	109	97.2	84.4	78.0	54.1	33.9	22.0	11.0
Italian Beginners	2011	369	95.9	88.1	76.7	61.8	45.8	30.1	14.4
	2010	357	94.7	87.4	80.1	63.0	48.5	32.2	19.0
Italian Continuers	2011	273	93.8	79.5	62.6	43.6	28.2	15.8	5.9
	2010	320	94.4	85.3	67.8	47.8	30.9	13.8	6.3
Italian Extension	2011	66	92.4	54.5	16.7	0.0			
	2010	60	88.3	68.3	31.7	5.0	0.0		
Japanese Beginners	2011	532	98.3	92.7	81.0	66.5	53.2	39.1	25.0
	2010	663	99.7	93.4	81.0	67.0	50.1	34.5	22.2
Japanese Continuers	2011	798	95.1	77.6	56.9	39.3	26.2	14.7	6.8
	2010	781	94.1	77.1	58.8	41.0	25.5	12.8	5.3
Japanese Extension	2011	269	95.2	68.4	28.6	8.6	1.9	0.0	
	2010	285	94.4	63.5	24.2	7.7	2.1	0.0	
Korean Background Speakers	2011	102	98.0	91.2	78.4	61.8	50.0	36.3	20.6
	2010	88	98.9	97.7	81.8	72.7	52.3	30.7	19.3
Latin Continuers	2011	170	70.0	40.6	15.9	7.6	2.4	1.2	0.0
	2010	176	78.4	46.0	25.6	8.5	4.5	0.6	0.0
Latin Extension	2011	100	63.0	22.0	8.0	4.0	2.0	2.0	0.0
	2010	97	66.0	32.0	14.4	4.1	3.1	1.0	0.0
Modern Greek Continuers	2011	106	95.3	88.7	81.1	66.0	50.9	38.7	21.7
	2010	97	93.8	84.5	75.3	64.9	49.5	29.9	14.4
Modern Hebrew	2011	41	73.2	51.2	26.8	17.1	9.8	4.9	2.4
	2010	45	82.2	53.3	26.7	11.1	0.0		

Table A5 Distributions of scaled marks by course: 2010–2011 (continued)

Course	Year	Number	Percentage of students with scaled mark less than:						
			45	40	35	30	25	20	15
Persian	2011	42	100.0	97.6	95.2	83.3	78.6	73.8	57.1
	2010	45	100.0	91.1	82.2	80.0	75.6	60.0	48.9
Spanish Beginners	2011	183	94.5	86.9	79.2	66.7	53.0	36.1	24.0
	2010	213	95.8	88.3	77.9	69.5	56.3	39.4	23.0
Spanish Continuers	2011	170	96.5	92.4	81.2	69.4	54.7	34.7	17.1
	2010	166	98.2	95.2	83.7	76.5	63.3	44.6	24.7
Spanish Extension	2011	45	97.8	91.1	77.8	60.0	24.4	2.2	0.0
	2010	46	97.8	95.7	71.7	50.0	23.9	4.3	0.0
Vietnamese	2011	182	97.3	94.0	88.5	79.7	67.0	49.5	32.4
	2010	181	98.9	94.5	88.4	77.3	68.0	51.9	37.0
Accounting	2011	438	95.7	80.6	63.0	50.5	34.7	22.1	13.9
	2010	530	93.2	77.5	62.8	46.0	33.4	24.2	17.2
Automotive Exam	2011	341			100.0	95.6	88.6	73.0	61.9
	2010	282			100.0	92.9	86.9	79.8	65.6
Business Services Exam	2011	1,417	100.0	99.2	95.3	87.2	74.0	60.6	43.0
	2010	1,462	100.0	99.7	94.5	86.9	72.6	57.9	39.4
Construction Exam	2011	1,643		100.0	98.2	91.3	81.4	67.8	48.7
	2010	1,536		100.0	98.3	92.8	81.6	67.8	51.2
Electrotechnology Exam	2011	210		100.0	97.1	87.6	76.2	59.5	38.6
	2010	172		100.0	95.3	87.8	76.7	60.5	42.4
Entertainment Industry Exam	2011	854	100.0	97.3	90.4	81.1	64.2	45.1	26.2
	2010	828	100.0	97.5	90.0	79.8	65.8	45.9	29.0
Hospitality Exam	2011	5,806	100.0	98.8	93.1	82.6	68.8	51.3	32.8
	2010	5,150	100.0	99.1	92.5	83.7	67.9	52.4	32.4
Information Technology Exam	2011	1,434	100.0	99.8	96.3	85.5	72.2	58.0	40.0
	2010	1,598	100.0	99.9	96.3	86.9	72.7	55.3	36.1
Metal and Engineering Exam	2011	746		100.0	98.9	92.5	84.0	69.8	51.5
	2010	671		100.0	99.0	93.4	84.2	70.3	53.9
Primary Industries Exam	2011	646	100.0	99.8	95.8	87.6	77.1	64.2	48.1
	2010	578	100.0	99.7	95.8	88.9	76.0	64.5	46.4
Retail Services Exam	2011	907	100.0	99.6	97.1	86.3	76.0	61.4	46.2
	2010	954	100.0	99.9	96.4	89.2	78.6	64.8	49.2
Tourism and Events Exam	2011	353	100.0	98.3	89.2	81.3	67.7	49.9	28.9
	2010	349	100.0	99.7	94.0	81.7	67.6	51.9	35.5

**Table A6 Courses that contribute to the ATAR**

- Notes: (i) This table shows the percentage of the course candidature who completed more than 10 units of ATAR courses for whom **all** units of that course contributed to their ATAR.
- (ii) The **Number receiving ATAR** column shows the number of students who did the course in 2011 or a previous year, and received an ATAR in 2011.
- (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 table excludes courses with less than 10 students.

Course	Number receiving ATAR	ATAR students with > 10 units		Percentage who counted course
		Number	Percentage	
Aboriginal Studies	219	47	21	91
Agriculture	1,055	512	49	75
Ancient History	11,208	4,949	44	85
Biology	16,200	8,023	50	81
Business Studies	13,561	5,701	42	86
Chemistry	10,904	7,028	64	74
Community and Family Studies	4,813	1,645	34	88
Dance	740	224	30	62
Design and Technology	2,979	1,162	39	76
Drama	4,279	1,619	38	75
Earth and Environmental Science	1,377	619	45	80
Economics	5,390	3,292	61	77
Engineering Studies	1,686	937	56	71
English Standard	25,563	8,386	33	100
English Advanced,	26,758	14,706	55	99
English Extension 1	5,320	3,812	72	82
English Extension 2	2,176	1,390	64	80
ESL	2,575	833	32	100
Food Technology	3,090	1,194	39	88
Geography	4,054	1,984	49	84
Industrial Technology	3,135	1,060	34	71
Information Processes and Technology	3,753	1,757	47	75
Legal Studies	8,613	3,862	45	84
General Mathematics	26,867	9,561	36	73
Mathematics	15,772	9,749	62	71
Mathematics Extension 1	8,716	6,667	76	91
Mathematics Extension 2	3,437	2,071	60	98
Modern History	9,599	4,705	49	83
History Extension	2,062	1,679	81	80
Music 1	4,210	1,592	38	64
Music 2	736	535	73	70
Music Extension	467	371	79	73
PDH&PE	12,852	5,033	39	85
Physics	9,287	5,800	62	75
Senior Science	4,454	1,645	37	83
Society and Culture	3,609	1,299	36	85
Software Design and Development	1,545	773	50	72

Table A6 Courses that contribute to the ATAR (continued)

Course	Number receiving ATAR	ATAR students with > 10 units		Percentage who counted course
		Number	Percentage	
Studies of Religion I	8,997	8,217	91	80
Studies of Religion II	4,704	1,919	41	84
Textiles and Design	1,964	672	34	79
Visual Arts	8,272	3,105	38	74
Arabic Continuers	185	113	61	69
Arabic Extension	56	54	96	81
Armenian	17	13	76	77
Chinese Beginners	27	7	26	57
Chinese Continuers	102	69	68	70
Chinese Extension	32	26	81	65
Chinese Background Speakers	902	268	30	65
Classical Greek Continuers	17	17	100	71
Classical Hebrew Continuers	28	20	71	80
Classical Hebrew Extension	17	14	82	57
Croatian	12	8	67	50
Filipino	28	11	39	82
French Beginners	561	220	39	79
French Continuers	828	599	72	64
French Extension	235	199	85	88
German Beginners	101	35	35	83
German Continuers	268	184	69	67
German Extension	80	67	84	82
Hindi	19	19	100	63
Indonesian Beginners	60	21	35	86
Indonesian Continuers	76	47	62	74
Indonesian Extension	21	19	90	53
Indonesian Background Speakers	89	35	39	51
Italian Beginners	337	152	45	81
Italian Continuers	260	180	69	66
Italian Extension	66	59	89	90
Japanese Beginners	522	154	30	67
Japanese Continuers	784	490	63	62
Japanese Extension	264	208	79	83
Japanese Background Speakers	32	11	34	55
Khmer	14	6	43	67
Korean Background Speakers	93	28	30	46
Latin Continuers	172	150	87	63
Latin Extension	102	97	95	73
Macedonian	17	12	71	67
Modern Greek Beginners	23	15	65	60
Modern Greek Continuers	98	68	69	63
Modern Greek Extension	38	33	87	79
Modern Hebrew	42	28	67	86
Persian	35	18	51	72
Polish	45	30	67	67

Table A6 Courses that contribute to the ATAR (continued)

Course	Number receiving ATAR	ATAR students with > 10 units		Percentage who counted course
		Number	Percentage	
Russian	23	13	57	54
Serbian	20	15	75	87
Spanish Beginners	164	76	46	74
Spanish Continuers	160	97	61	73
Spanish Extension	42	35	83	66
Tamil	21	20	95	60
Turkish	48	26	54	50
Vietnamese	169	81	48	64
Accounting	412	237	58	64
Automotive Exam	146	54	37	61
Business Services Exam	1,076	387	36	79
Construction Exam	982	347	35	78
Electrotechnology Exam	138	49	36	63
Entertainment Industry Exam	749	265	35	80
Hospitality Exam	4,903	1,810	37	79
Information Technology Exam	1,196	463	39	67
Metal and Engineering Exam	374	161	43	70
Primary Industries Exam	415	177	43	70
Retail Services Exam	614	256	42	63
Tourism and Events Exam	273	92	34	62

**Table A7 ATAR distribution**

- Notes: (i) This table shows the number of students receiving each ATAR from 99.95 to 99.00 and the number corresponding to the stated ATAR ranges down to 30.00–30.95
- (ii) The median ATAR in 2011 was 69.25

ATAR	Number	Number on or above	Percentage on or above
99.95	49	49	0.1
99.90	49	98	0.2
99.85	47	145	0.3
99.80	44	189	0.3
99.75	49	238	0.4
99.70	44	282	0.5
99.65	47	329	0.6
99.60	43	372	0.7
99.55	52	424	0.8
99.50	47	471	0.9
99.45	48	519	0.9
99.40	44	563	1.0
99.35	46	609	1.1
99.30	46	655	1.2
99.25	52	707	1.3
99.20	45	752	1.4
99.15	43	795	1.4
99.10	46	841	1.5
99.05	47	888	1.6
99.00	47	935	1.7
99.00 – 99.95	935	935	1.7
98.00 – 98.95	917	1852	3.4
97.00 – 97.95	930	2782	5.1
96.00 – 96.95	923	3705	6.7
95.00 – 95.95	935	4640	8.5
94.00 – 94.95	901	5541	10.1
93.00 – 93.95	916	6457	11.8
92.00 – 92.95	929	7386	13.5
91.00 – 91.95	922	8308	15.1
90.00 – 90.95	933	9241	16.8
89.00 – 89.95	903	10144	18.5
88.00 – 88.95	910	11054	20.1
87.00 – 87.95	926	11980	21.8
86.00 – 86.95	917	12897	23.5
85.00 – 85.95	901	13798	25.1
84.00 – 84.95	896	14694	26.8
83.00 – 83.95	902	15596	28.4
82.00 – 82.95	917	16513	30.1
81.00 – 81.95	868	17381	31.7
80.00 – 80.95	895	18276	33.3
79.00 – 79.95	900	19176	34.9
78.00 – 78.95	864	20040	36.5

Table A7 ATAR distribution (continued)

ATAR	Number	Number on or above	Percentage on or above
77.00 - 77.95	865	20905	38.1
76.00 - 76.95	862	21767	39.7
75.00 - 75.95	875	22642	41.2
74.00 - 74.95	851	23493	42.8
73.00 - 73.95	851	24344	44.3
72.00 - 72.95	839	25183	45.9
71.00 - 71.95	836	26019	47.4
70.00 - 70.95	844	26863	48.9
69.00 - 69.95	840	27703	50.5
68.00 - 68.95	809	28512	51.9
67.00 - 67.95	805	29317	53.4
66.00 - 66.95	787	30104	54.8
65.00 - 65.95	794	30898	56.3
64.00 - 64.95	766	31664	57.7
63.00 - 63.95	772	32436	59.1
62.00 - 62.95	773	33209	60.5
61.00 - 61.95	740	33949	61.8
60.00 - 60.95	745	34694	63.2
59.00 - 59.95	719	35413	64.5
58.00 - 58.95	729	36142	65.8
57.00 - 57.95	720	36862	67.1
56.00 - 56.95	712	37574	68.4
55.00 - 55.95	674	38248	69.7
54.00 - 54.95	673	38921	70.9
53.00 - 53.95	637	39558	72.1
52.00 - 52.95	678	40236	73.3
51.00 - 51.95	622	40858	74.4
50.00 - 50.95	578	41436	75.5
49.00 - 49.95	626	42062	76.6
48.00 - 48.95	595	42657	77.7
47.00 - 47.95	601	43258	78.8
46.00 - 46.95	570	43828	79.8
45.00 - 45.95	542	44370	80.8
44.00 - 44.95	517	44887	81.8
43.00 - 43.95	513	45400	82.7
42.00 - 42.95	505	45905	83.6
41.00 - 41.95	500	46405	84.5
40.00 - 40.95	472	46877	85.4
39.00 - 39.95	424	47301	86.2
38.00 - 38.95	495	47796	87.1
37.00 - 37.95	433	48229	87.9
36.00 - 36.95	423	48652	88.6
35.00 - 35.95	428	49080	89.4
34.00 - 34.95	396	49476	90.1
33.00 - 33.95	382	49858	90.8
32.00 - 32.95	350	50208	91.5
31.00 - 31.95	361	50569	92.1
30.00 - 30.95	337	50906	92.7

**Table A8 ATAR percentiles: 2009–2011**

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

Percentile	ATAR 2009	ATAR 2010	ATAR 2011
100	99.95	99.95	99.95
99	99.40	99.40	99.40
98	98.85	98.80	98.80
95	97.15	97.10	97.00
90	94.35	94.20	94.05
85	91.50	91.30	91.05
80	88.60	88.30	88.05
75	85.70	85.35	85.05
70	82.75	82.35	82.00
60	76.70	76.20	75.80
50	70.25	69.80	69.25
40	63.30	62.85	62.30
30	55.50	55.25	54.70

**Table A9 Relationship between ATAR and aggregates: 2009–2011**

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

ATAR	Lowest aggregate		
	2009	2010	2011
99.95	478.9	476.2	476.5
99.50	457.7	455.2	456.2
99.00	446.6	444.8	445.6
98.00	431.3	430.0	432.2
95.00	401.5	403.0	403.7
90.00	367.4	369.6	371.2
85.00	340.0	341.5	343.7
80.00	315.1	317.6	318.9
75.00	292.4	295.5	295.7
70.00	271.0	273.4	274.1
65.00	250.4	252.5	252.9
60.00	231.1	231.7	233.1
55.00	212.1	211.6	213.0
50.00	193.1	192.4	193.5



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