

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

NSW Vice-Chancellors' Committee – Technical Committee on Scaling



## Contents

Pr	eface	iii
Ac	knowledgements	iv
De	finitions	v
1	The Higher School Certificate (HSC)         1.1       Eligibility for an HSC         1.2       Reporting student achievement in the HSC         1.2.1       Defining standards by performance bands         1.2.2       Examination marks         1.2.3       School assessments         1.2.4       HSC marks	<b>1</b> 1 1 2 2 2
2	<ul> <li>The Australian Tertiary Admission Rank (ATAR) – an overview</li> <li>2.1 Background</li> <li>2.2 Categorisation of ATAR courses</li> <li>2.3 Eligibility for an ATAR in 2015</li> <li>2.4 Calculation of the ATAR</li> <li>2.5 The ATAR Advice Notice</li> </ul>	<b>3</b> 3 4 4 4
3	Calculating the ATAR in 2015         3.1       Overview         3.2       The scaling process in 2015         3.2.1       Marks used in the ATAR calculations         3.2.2       Raw HSC marks         3.2.3       Combined courses         3.2.4       Initial standardisation         3.2.5       Calculating scaled means and standard deviations         3.2.6       Setting maximum marks         3.2.7       Scaling individual marks         3.2.8       Calculating aggregates and ATAR-eligible percentiles         3.2.9       Calculating the ATAR	<b>6</b> 7 7 7 7 7 8 8 8 8
4	<ul> <li>HSC and ATAR in 2015 - some results</li> <li>4.1 Overview</li> <li>4.2 Percentage of students receiving an ATAR</li> <li>4.3 Number of units of ATAR courses completed</li> <li>4.4 Course enrolments - Table A1</li> <li>4.5 Distributions of HSC marks - Table A2</li> <li>4.6 Descriptive statistics of HSC and scaled marks - Table A3</li> <li>4.7 Distribution of ATARs - Table A7</li> <li>4.8 ATAR percentiles and relationship between ATAR and aggregates - Tables A8, A9</li> <li>4.9 Gender differences</li> <li>4.10 University offers</li> </ul>	<b>11</b> 11 11 12 12 13 14 14 15 16
5	<ul> <li>Trends and other issues</li> <li>5.1 Variation in patterns of HSC marks – Tables A4, A5</li> <li>5.2 Distributions of English and Mathematics marks: 2012 – 2015</li> <li>5.3 Courses that contribute to the ATAR – Table A6</li> </ul>	<b>17</b> 17 18 21

<ul> <li>6 Frequently asked questions <ul> <li>6.1 Why is my ATAR low in comparison to my HSC marks?</li> <li>6.2 Why does this course contribute to my ATAR when another course where I received a higher mark does not count?</li> <li>6.3 Other frequently asked questions</li> </ul> </li> <li>7 Appendix <ul> <li>Table A1 Course enrolments, gender, ATAR eligibility and maximum ATAR by course</li> <li>Table A2 Distributions of 2015 HSC marks by course</li> <li>Table A3 Descriptive statistics and selected percentiles for HSC marks and scaled marks by course</li> <li>Table A4 Distributions of HSC marks by course: 2015 and 2014</li> <li>Table A5 Distributions of scaled marks by course: 2015 and 2014</li> <li>Table A6 Courses that contribute to the ATAR (more than 10 units)</li> <li>Table A7 ATAR distribution</li> <li>Table A8 ATAR percentiles: 2011 – 2015</li> <li>Table A9 Relationship between the ATAR and aggregates: 2011 – 2015</li> </ul> </li> </ul>							
<ul> <li>6.1 Why is my ATAR low in comparison to my HSC marks?</li> <li>6.2 Why does this course contribute to my ATAR when another course where I received a higher mark does not count?</li> <li>6.3 Other frequently asked questions</li> </ul> <b>7 Appendix</b> Table A1 Course enrolments, gender, ATAR eligibility and maximum ATAR by course Table A2 Distributions of 2015 HSC marks by course Table A3 Descriptive statistics and selected percentiles for HSC marks and scaled marks by course Table A4 Distributions of HSC marks by course: 2015 and 2014 Table A5 Distributions of scaled marks by course: 2015 and 2014 Table A6 Courses that contribute to the ATAR (more than 10 units) Table A7 ATAR distribution Table A8 ATAR percentiles: 2011 – 2015 Table A9 Relationship between the ATAR and aggregates: 2011 – 2015	6	Frequent	ly asked questions	22			
<ul> <li>6.2 Why does this course contribute to my ATAR when another course where I received a higher mark does not count?</li> <li>6.3 Other frequently asked questions</li> </ul> 7 Appendix Table A1 Course enrolments, gender, ATAR eligibility and maximum ATAR by course Table A2 Distributions of 2015 HSC marks by course Table A3 Descriptive statistics and selected percentiles for HSC marks and scaled marks by course Table A4 Distributions of HSC marks by course: 2015 and 2014 Table A5 Distributions of scaled marks by course: 2015 and 2014 Table A6 Courses that contribute to the ATAR (more than 10 units) Table A7 ATAR distribution Table A8 ATAR percentiles: 2011 – 2015 Table A9 Relationship between the ATAR and aggregates: 2011 – 2015		<ul><li>6.1 Why is my ATAR low in comparison to my HSC marks?</li><li>6.2 Why does this course contribute to my ATAR when another course where I received a higher mark does not count?</li></ul>					
<ul> <li>6.3 Other frequently asked questions</li> <li>7 Appendix <ul> <li>Table A1</li> <li>Course enrolments, gender, ATAR eligibility and maximum ATAR by course</li> <li>Table A2</li> <li>Distributions of 2015 HSC marks by course</li> <li>Table A3</li> <li>Descriptive statistics and selected percentiles for HSC marks and scaled marks by course</li> <li>Table A4</li> <li>Distributions of HSC marks by course: 2015 and 2014</li> <li>Table A5</li> <li>Distributions of scaled marks by course: 2015 and 2014</li> <li>Table A6</li> <li>Courses that contribute to the ATAR (more than 10 units)</li> <li>Table A7</li> <li>ATAR distribution</li> <li>Table A8</li> <li>ATAR percentiles: 2011 – 2015</li> <li>Table A9</li> <li>Relationship between the ATAR and aggregates: 2011 – 2015</li> </ul> </li> </ul>							
<ul> <li>7 Appendix</li> <li>Table A1 Course enrolments, gender, ATAR eligibility and maximum ATAR by course</li> <li>Table A2 Distributions of 2015 HSC marks by course</li> <li>Table A3 Descriptive statistics and selected percentiles for HSC marks and scaled marks by course</li> <li>Table A4 Distributions of HSC marks by course: 2015 and 2014</li> <li>Table A5 Distributions of scaled marks by course: 2015 and 2014</li> <li>Table A6 Courses that contribute to the ATAR (more than 10 units)</li> <li>Table A7 ATAR distribution</li> <li>Table A8 ATAR percentiles: 2011 – 2015</li> <li>Table A9 Relationship between the ATAR and aggregates: 2011 – 2015</li> </ul>	6.3 Other frequently asked questions						
<ul> <li>Table A1 Course enrolments, gender, ATAR eligibility and maximum ATAR by course</li> <li>Table A2 Distributions of 2015 HSC marks by course</li> <li>Table A3 Descriptive statistics and selected percentiles for HSC marks and scaled marks by course</li> <li>Table A4 Distributions of HSC marks by course: 2015 and 2014</li> <li>Table A5 Distributions of scaled marks by course: 2015 and 2014</li> <li>Table A6 Courses that contribute to the ATAR (more than 10 units)</li> <li>Table A7 ATAR distribution</li> <li>Table A8 ATAR percentiles: 2011 – 2015</li> <li>Table A9 Relationship between the ATAR and aggregates: 2011 – 2015</li> </ul>	7	Appendix	(	28			
<ul> <li>Table A2 Distributions of 2015 HSC marks by course</li> <li>Table A3 Descriptive statistics and selected percentiles for HSC marks and scaled marks by course</li> <li>Table A4 Distributions of HSC marks by course: 2015 and 2014</li> <li>Table A5 Distributions of scaled marks by course: 2015 and 2014</li> <li>Table A6 Courses that contribute to the ATAR (more than 10 units)</li> <li>Table A7 ATAR distribution</li> <li>Table A8 ATAR percentiles: 2011 – 2015</li> <li>Table A9 Relationship between the ATAR and aggregates: 2011 – 2015</li> </ul>		Table A1	Course enrolments, gender, ATAR eligibility and maximum ATAR by course	29			
<ul> <li>Table A3 Descriptive statistics and selected percentiles for HSC marks and scaled marks by course</li> <li>Table A4 Distributions of HSC marks by course: 2015 and 2014</li> <li>Table A5 Distributions of scaled marks by course: 2015 and 2014</li> <li>Table A6 Courses that contribute to the ATAR (more than 10 units)</li> <li>Table A7 ATAR distribution</li> <li>Table A8 ATAR percentiles: 2011 – 2015</li> <li>Table A9 Relationship between the ATAR and aggregates: 2011 – 2015</li> </ul>		Table A2	Distributions of 2015 HSC marks by course	32			
<ul> <li>Table A4 Distributions of HSC marks by course: 2015 and 2014</li> <li>Table A5 Distributions of scaled marks by course: 2015 and 2014</li> <li>Table A6 Courses that contribute to the ATAR (more than 10 units)</li> <li>Table A7 ATAR distribution</li> <li>Table A8 ATAR percentiles: 2011 – 2015</li> <li>Table A9 Relationship between the ATAR and aggregates: 2011 – 2015</li> </ul>		Table A3	Descriptive statistics and selected percentiles for HSC marks and scaled marks by course	35			
<ul> <li>Table A5 Distributions of scaled marks by course: 2015 and 2014</li> <li>Table A6 Courses that contribute to the ATAR (more than 10 units)</li> <li>Table A7 ATAR distribution</li> <li>Table A8 ATAR percentiles: 2011 – 2015</li> <li>Table A9 Relationship between the ATAR and aggregates: 2011 – 2015</li> </ul>		Table A4	Distributions of HSC marks by course: 2015 and 2014	40			
<ul> <li>Table A6 Courses that contribute to the ATAR (more than 10 units)</li> <li>Table A7 ATAR distribution</li> <li>Table A8 ATAR percentiles: 2011 – 2015</li> <li>Table A9 Relationship between the ATAR and aggregates: 2011 – 2015</li> </ul>		Table A5	Distributions of scaled marks by course: 2015 and 2014	44			
<ul> <li>Table A7 ATAR distribution</li> <li>Table A8 ATAR percentiles: 2011 – 2015</li> <li>Table A9 Relationship between the ATAR and aggregates: 2011 – 2015</li> </ul>		Table A6	Courses that contribute to the ATAR (more than 10 units)	48			
Table A8ATAR percentiles: 2011 – 2015Table A9Relationship between the ATAR and aggregates: 2011 – 2015		Table A7	ATAR distribution	51			
Table A9 Relationship between the ATAR and aggregates: 2011 – 2015		Table A8	ATAR percentiles: 2011 – 2015	53			
		Table A9	Relationship between the ATAR and aggregates: 2011 – 2015	53			

## Preface

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

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

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

Calculation of the ATAR is the responsibility of the Technical Committee on Scaling on behalf of the NSW Vice-Chancellors' Committee. The NSW Board of Studies, Teaching and Educational Standards (BOSTES) provides the HSC data from which the ATARs are calculated and the Universities Admissions Centre (UAC) advises individual students of their ATARs. Because of confidentiality provisions specified in Government legislation, ATARs cannot be provided to BOSTES, to schools or to other agencies.

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

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

## **Acknowledgements**

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

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

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

## Definitions

### ABS

The ABS is the Australian Bureau of Statistics.

### ATAR cohort

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

### ATAR courses

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

### Board Developed courses

Board Developed courses are courses whose syllabuses have been developed by the Board of Studies, Teaching and Educational Standards NSW (BOSTES).

### Board Endorsed courses

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

### HSC cohort

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

### The Board

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

### UAC

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

### VET examination courses

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

## 1 The Higher School Certificate (HSC)

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

### 1.1 Eligibility for an HSC

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

These HSC courses must include at least:

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

Further details about HSC eligibility and HSC courses can be found in the *Assessment, Certification and Examination Manual*, and in the booklet *Higher School Certificate Rules and Procedures*, which are published annually by the Board, and are available on the Board's website at www.boardofstudies.nsw.edu.au.

### 1.2 Reporting student achievement in the HSC

For most ATAR courses, the Board reports student achievement against published standards by:

- an examination mark
- a school assessment
- an HSC mark
- a performance band.

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

#### 1.2.1 Defining standards by performance bands

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

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

It follows that, although the standards described by the performance bands in a course will be the same from year to year, **standards in different courses are not the same as they are based on different criteria**. Because of this it should not be expected that the percentages of students in the six bands will be the same across courses. For any course the percentages may also vary from year to year if student performance changes.

The ranges of marks for the bands are as follows:

#### 2-unit courses

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

#### Extension courses (except Mathematics Extension 2)

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

#### Mathematics Extension 2\*

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

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

#### 1.2.2 Examination marks

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

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

### 2.1 Background

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

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

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

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

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

Since 2014 a two parameter logistic function has been used to translate the HSC students' positions based on their scaled aggregate marks into ATARs. This procedure is consistent with that used in other jurisdictions without Year 10 examinations.

The ATAR is reported as a **number** between 0 and 99.95 with increments of 0.05. The ATAR is not a mark. Specifically, a student's ATAR indicates the position of that student relative to their Year 7 cohort. Students who receive an ATAR of 80.00 in 2015, for example, have performed well enough in the HSC to place them 20 per cent from the top of their Year 7 cohort, if all the 2010 Year 7 students completed Year 12 and were eligible for an ATAR in 2015.

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

### 2.2 Categorisation of ATAR courses

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

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

The Category B courses in 2015 were:

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

### 2.3 Eligibility for an ATAR in 2015

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

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

### 2.4 Calculation of the ATAR

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

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

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

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

### 2.5 The ATAR Advice Notice

The ATAR Advice Notice includes:

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

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

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

An example of an ATAR Advice Notice is given below.



## 3 Calculating the ATAR in 2015

### 3.1 Overview

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

With the exception of English, which is compulsory, students are free to choose their courses of study. Consequently, individual course candidatures vary in size and nature, and there are many different enrolment patterns. In 2015 there were 27,356 different enrolment patterns for ATAR-eligible students; only 215 of these 27,356 combinations were completed by 20 or more students and 19,760 were taken by only one student. Given the choice available, it follows that a student's rank in different courses will not necessarily have the same meaning, as good rankings are more difficult to obtain when the student is competing against students of high academic ability.

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

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

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

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

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

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

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

Each ATAR corresponds to a range of aggregates and the number of students with each ATAR varies, depending in part on how many candidates tie on the same aggregate.

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

### 3.2 The scaling process in 2015

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

#### 3.2.1 Marks used in the ATAR calculations

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

- a raw examination mark
- a raw moderated school assessment<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.

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

#### 3.2.4 Initial standardisation

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

#### 3.2.5 Calculating scaled means and standard deviations

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

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

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

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

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

#### 3.2.6 Setting maximum marks

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

In 2015 the maximum possible scaled mark in a course was given by the smaller of 50 and the scaled mean + 2.48 times the initial scaled standard deviation, where the scaled mean and initial scaled standard deviation of the course are determined using the scaling algorithm.

The number 2.48 was determined on the basis that the maximum possible scaled mark in the combined 2-unit English course is 50. This number is calculated afresh each year.

#### 3.2.7 Scaling individual marks

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

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

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

#### 3.2.8 Calculating aggregates and ATAR-eligible percentiles

Aggregates of scaled marks are calculated to one decimal place according to the rules described in section 2.4. In 2015 there were 4,452 distinct aggregates. There are a large number of tied results with some aggregates shared by more than 30 students.

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

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

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

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

#### 3.2.9 Calculating the ATAR

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

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





The specific form of the logistic function will depend on the proportion of students in the target population who are ATAReligible. This proportion is called the participation rate. In 2015 the participation rate in NSW, determined using Australian Bureaus of Statistics data, was 60.1 per cent, up from 59.6 per cent in 2014.

The anchor frequency is the number *N*, allocated to the 99.95 category. The top category should contain 1/2000th of the target population as all the most able candidates are assumed to complete Year 12 and apply for an ATAR. In 2015 this target frequency was N = 46.

The logistic model is  $log [p_j / (1-p_j)] = a + b x_j$ , where  $Np_j$  is the target frequency of students at ATAR  $x_j$  for  $x_j$  less than 99.95. To be consistent with recent NSW ATAR patterns the minimum ATAR awarded was set at 7.00. The target proportions were then rescaled to ensure the target proportions summed to 1. The parameters in the logistic model were estimated using historical ATAR and participation rate data for NSW for 2006–2014.

Starting with the highest aggregate, the candidates are progressively allocated to ATAR categories to achieve the cumulative target frequencies. There is noise in the allocation due to ties in the aggregates. The resulting pattern is shown in Figure 3.2

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



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





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





Each ATAR corresponds to a range of aggregate marks. The range of aggregates corresponding to one ATAR is greatest in the extremes of the distribution of aggregates and smallest near the middle of the distribution of aggregates. Table 3.2 gives ATARs for selected aggregates based on the 2015 data.

	unsinp be	ween aygregate and Ar
Aggrega	ate	ATAR
450.0	)	99.15
400.0	)	94.40
350.0	)	86.20
300.0	)	75.70
250.0	)	64.25
200.0	)	52.00
150.0	)	38.65

I ADIE 5.2 REIALIUIISIIIP DELWEETI AYYI EYALE ATIU ATA	Table 3.2	Relationshi	p between	aggregate	and ATA
--	-----------	-------------	-----------	-----------	---------

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

### 4.1 Overview

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

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

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

### 4.2 Percentage of students receiving an ATAR

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

- 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 2015 there were 9,552 such students.

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

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

### 4.3 Number of units of ATAR courses completed

The pattern in 2015 was similar to that observed in 2014, with 45.6 per cent completing exactly 10 ATAR units and 31.7 per cent completing more than the required minimum number of ATAR units (Table 4.2).

Number of	2012	2013	2014	20	15
units	%	%	%	%	Number
1	0.2	0.4	0.4	0.5	384
2	5.7	6.6	7.0	7.6	5,471
3	0.4	0.4	0.5	0.5	385
4	4.3	4.6	5.0	5.3	3,815
5	0.1	0.1	0.2	0.1	78
6	5.1	5.5	5.3	5.1	3,698
7	0.2	0.2	0.2	0.2	111
8	4.5	4.2	3.5	3.2	2,278
9	0.3	0.2	0.2	0.2	111
10	45.1	44.2	44.6	45.6	32,952
11	18.2	17.9	17.9	17.2	12,458
12	13.9	13.7	13.3	12.8	9,266
13	1.6	1.5	1.5	1.3	951
14	0.3	0.3	0.3	0.3	231
15+	0.1	0.1	0.1	0.1	49
HSC candidature	69,638	70,686	71,706		72,238

Table 4.2 Percentage of students completing specified numbers of units<sup>1</sup> of ATAR courses: 2012–2015

<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 award in 2015, the number who received an ATAR in 2015, the percentage of females and the maximum ATAR gained by a student enrolled in that course. The table includes students who completed the course in 2015 as well as those who completed the course in previous years and completed at least one ATAR course in 2015. The table excludes courses where there were less than 10 students.

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

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

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

A total of 20,310 students enrolled in at least one VET course, of which 13,784 students enrolled in a VET examination course. The proportion taking a VET examination course in 2015 (67.9 per cent) is lower than 2014 (69.5 per cent).

Overall, 77.2 per cent of the 2015 HSC cohort received ATARs but the percentage varied across courses, from 48.8 per cent to 100 per cent for Category A courses with candidatures exceeding 100. For students enrolled in any VET courses the overall figure was 51.9 per cent but was higher, 75.5 per cent, for students enrolled in VET examination courses.

### 4.5 Distributions of HSC marks – Table A2

Table A2 in the Appendix shows the distributions of HSC marks in 2015. For each course the percentage of students in bands 2 to 6 are given, together with the median HSC mark and the Band in which the median lies. Data are not provided for courses with less than 10 students.

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

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

Comparison of Table A2 with the corresponding table in 2014 shows that distribution of HSC marks has changed for some courses. (See Section 5.1.)

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

Table A3 in the Appendix presents, for each course, descriptive statistics and the 99th, 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 2015 irrespective of whether they were eligible for an ATAR or not.

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

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

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

A given HSC mark often corresponds to a range of raw and scaled marks and hence to a range of percentiles. Table A3 gives the HSC mark at the specified percentile. Not all students with that HSC mark will be at that percentile when the raw marks are considered. For example in History Extension the HSC mark at the 90th percentile was 46.0. Students with a History Extension HSC mark of 46.0 in fact corresponded to the scaled mark percentile range 82.3 to 91.4.

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

Looking at English Extension 2 in Table A3 we see that the maximum mark and the 99th percentile of the HSC distribution are both 50.0 whereas the scaled marks at the corresponding percentiles are 50.0 and 48.8. This illustrates that there is not a unique scaled mark corresponding to a given HSC mark.

The primary purpose of Table A3 is to show the relativities between courses. For example, Table 4.3 shows the scaled marks corresponding to the 90th and 50th percentiles for French Continuers, Design and Technology and Information Processes and Technology.

Course	Scaled	Scaled mark for		
Course	mean	P <sub>90</sub>	P <sub>50</sub>	
French Continuers	35.1	45.2	36.3	
Design and Technology	21.5	36.3	20.7	
Information Processes and Technology	21.5	36.2	21.2	

#### Table 4.3 Scaled marks for selected percentiles

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

### 4.7 Distribution of ATARs – Table A7

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

An ATAR of 99.00 does **not** represent the top 1 per cent of the ATAR cohort; 1.7 per cent of the 2015 ATAR cohort actually gained an ATAR of 99.00 or above. It does, however, represent the level of achievement necessary to be in the top 1 per cent of the 2010 Year 7 cohort if all those students continued to Year 12 and had been eligible for an ATAR in 2015. From Table 4.4 we see that in 2015, 16.5 per cent of the ATAR-eligible students received an ATAR of 90.00 or above and 32.7 per cent gained an ATAR of 80.00 and above.

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

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

#### Table 4.5 Median ATAR: 2011–2015

Year	Median ATAR all students	Median ATAR female	Median ATAR male
2011	<b>6</b> 9.25	71.10	67.00
2012	69.55	71.35	67.55
2013	69.20	71.00	67.00
2014	68.95	70.30	67.20
2015	68.70	70.75	66.35

Table 4.5 shows the median ATAR and the median ATAR for male and female candidates for the years 2011–2015.

In 2015, 46 students received the top ATAR of 99.95, 25 males and 21 females, from a mix of government and independent schools.

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

Table A8 in the Appendix shows the ATAR corresponding to selected ATAR-eligible percentiles. For example, 10 per cent of the ATAR cohort in 2015 received an ATAR of 93.95 or above.

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

### 4.9 Gender differences

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

ATAR	2011 % female	2012 % female	2013 % female	2014 % female	2015 % female
99.00	47.1	50.1	50.3	46.5	50.2
98.00	50.9	52.8	52.0	48.3	52.1
95.00	53.4	54.9	54.0	51.3	54.1
90.00	55.9	55.7	55.8	53.8	56.2
80.00	56.7	56.3	56.9	55.2	57.1
70.00	56.4	55.9	56.6	55.4	56.4
60.00	55.9	55.2	56.0	55.2	55.5
50.00	55.3	54.6	55.2	54.7	54.9
40.00	54.7	54.0	54.5	54.2	54.3
30.00	54.2	53.6	54.1	53.7	53.8
Total cohort	53.4	53.0	53.5	53.1	53.0

Table 4.6Percentage of students receiving ATARs on or<br/>above specified values who were female: 2011–2015

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 53.0 per cent of the ATAR cohort was female, which is represented by the horizontal line on the graph. The graph shows clearly that there were proportionally more females on ATARs above 70.00 than males.





The vast majority of students who completed the 2015 NSW Higher School Certificate were in year 7 in 2010. The following table reveals that there are substantial gender differences in the proportions of students from the 2010 NSW Year 7 school cohort who subsequently went on to receive an HSC award or ATAR in 2015.

Comparisons with the equivalent figures for the 2011 HSC shows that gender difference in the proportion of the corresponding Year 7 cohort becoming eligible for an ATAR increased by 1 per cent over the four year period.

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

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

\*Australian Bureau of Statistics data: Schools, Australia 2015

### 4.10 University offers

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

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

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

Δ	TAD bond	Total number	Applicants				
P	TAK Dahu	of students	Number	Percentage <sup>1</sup>			
90	.00 – <b>99.9</b> 5	9,208	<b>9</b> ,101	<b>98</b> .8			
80	.00 - 89.95	8,993	8,685	96.6			
70	.00 - 79.95	8,605	8,000	93.0			
60	.00 - 69.95	7,948	6,884	86.6			
50	. <b>00 – 5</b> 9.95	6,924	5,310	76.7			
B	elow 50.00	14,058	7,314	52.0			
	Total	55,736	45,294	81.3			

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

Not all the applicants have been made an offer solely on the basis of their ATARs. For some programs alternative criteria have been used, while for other programs students' ATARs have been supplemented by additional criteria.

Table 4.9	Offers of	university	places by	/ ATAR –	domestic o	nly
-----------	-----------	------------	-----------	----------	------------	-----

ATAD bond	Number of	Offers			
ATAK Dahu	applicants	Number	Percentage <sup>2</sup>		
90.00–99.95	8,932	8,891	99.5		
80.00-89.95	8,515	8,386	98.5		
70.00–79.95	7,881	7,574	96.1		
60.00-69.95	6,751	6,122	90.7		
50.00-59.95	5,204	3,705	71.2		
Below 50.00	7,057	1,404 19.9			
Total	44,340	36,082	81.4		

<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

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

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

Tables A4 and A5 in the Appendix show the distributions of HSC and scaled marks, respectively, in 2015 and 2014. The marks are on a per-unit basis (0–50) and courses with less than 40 students in either year are not included. Table A4 shows the percentages of each course candidature with an HSC mark less than 45, 40, 35, 30 and 25 for 2015 and 2014. Table A5 provides similar information for scaled marks. The data show that while the distributions of HSC marks have changed for some courses, the distributions of scaled marks were generally the same.

Community and Family Studies is an example of a course where the candidature was almost the same as in 2014 but there is a change in the distribution of HSC marks (Table 5.1). The distributions of scaled marks in the two years were, however, similar.

Mork	Veer	Figure las opt	Perce	ı mark less	less than:		
IVIAI K	Tear	Enroiment	45	40	35	30	25
HSC mark	2015	<b>7</b> ,957	94.2	67.6	34.3	13.4	3.1
	2014	7,687	94.3	62.9	28.9	8.5	1.8
Scaled mark	2015	7,957	100.0	98.8	92.1	82.0	69.1
	2014	7,687	100.0	98.9	92.4	82.0	69.4

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

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

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

Because all students study English, and most study Mathematics, comparative data is shown for English and Mathematics courses for the four years, 2012 to 2015. Table 5.4 shows the distributions of HSC marks and Table 5.5 shows the distributions of scaled marks.

There is a continuing decline in the number of students completing English Extension 1 and English Extension 2 that has persisted over the past 5 years. By comparison the number of students completing the non-ATAR course English Studies is growing. In 2015 there were 6,403 candidates who completed English Studies. These students were not ATAR eligible.

In 2015, 16.2 per cent of ATAR eligible students did not complete a mathematics course and 23.5 per cent of those awarded an HSC did not include a Board developed mathematics course in their Year 12 HSC subjects.

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

- In 2 unit English, all students complete a common paper (Paper 1) which counts for 40 per cent of the total mark. Advanced and Standard students then complete separate papers that count for 60 per cent of the total mark.
- The Board uses Paper 1 to place the marks of the separate Standard and Advanced papers on the same scale so that a total (raw) examination mark can be calculated for 2 unit English. The marks for Standard and Advanced students are deemed to be on the same scale.
- The Board moderates school assessments using these raw examination marks.
- The raw HSC marks which are used for scaling are then calculated.
- The raw HSC marks for the English Standard and Advanced students are combined and scaled as a single course. A raw HSC mark yields the same scaled mark for Standard and Advanced students.
- The Board aligns the raw examination marks against standards separately for Standard and Advanced students. As a result, Advanced students on a given raw mark may receive a different aligned mark than Standard students on the same raw mark. Consequently an aligned HSC mark may correspond to a slightly different range of scaled marks for Standard and Advanced students.

By contrast, the courses Mathematics General 2 and Mathematics are distinct 2-unit courses. They have no assessment components in common and so they are scaled as separate courses. The performance band information for 2-unit only students in Mathematics is presented below. Table 5.2 shows the information broken down as per the information supplied for other subjects in Table A2. Table 5.3 shows the information broken down as per the information supplied for other subjects in Table A3.

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

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

Table 5.3	Distributions	of HSC and	l scaled marks	for Mathematic	cs 2 unit on	ly candidates
						1

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

	Voor	Eprolmont	Percenta	age of stud	ents with H	ISC mark I	ess than:
	real		45	40	35	30	25
English Standard	2015	31,501	99.6	91.6	57.6	15.3	3.3
	2014	31,483	99.7	91.8	56.5	14.3	2.8
	2013	31,495	99.6	93.1	65.8	21.0	4.5
	2012	31,803	99.5	84.2	48.3	21.5	3.1
English Advanced	2015	26,002	84.6	42.1	8.8	0.9	0.2
	2014	26,729	85.3	40.6	8.4	0.8	0.2
	2013	27,007	88.0	46.9	13.9	1.5	0.2
	2012	27,217	87.4	45.9	11.2	0.9	0.1
English Extension 1	2015	4,512	65.4	22.5	5.7	0.9	0.2
	2014	4,848	69.4	29.3	6.8	1.1	0.3
	2013	5,007	75.3	34.6	11.5	3.2	0.8
	2012	5,265	75.0	35.4	12. <b>7</b>	3.2	0.8
English Extension 2	2015	1,631	73.8	42.8	17.5	4.0	0.3
	2014	1,776	76.8	49.2	22.5	6.8	1.7
	2013	1,907	77.3	47.7	22.0	7.4	2.4
	2012	2,126	78.1	50.0	21.4	6.9	1.7
ESL	2015	2,368	<b>9</b> 6.0	73.7	38. <b>8</b>	<b>16</b> .5	4.1
	2014	2,291	95.5	71.4	33.8	10.4	2.1
	2013	<b>2</b> ,410	97.4	76. <b>6</b>	<b>40</b> .2	15.7	4.1
	2012	2,513	<b>96</b> .8	<b>7</b> 5.1	35.0	10.6	3.5
Mathematics General 2	2015	31,511	94.3	74.1	49.5	25.1	7.5
	2014	31,321	94.5	74.7	48.7	24.0	6.4
	2013	32,376	94.0	78.8	57.4	23.7	7.9
	2012	31,702	94.4	77.7	48.6	19.7	5.5
Mathematics	<b>20</b> 15	16,450	80.3	47.5	19.1	9.2	3.1
	2014	16,693	78.2	46.1	18.3	8.5	3.5
	2013	16,463	81.5	50.5	23.1	7.3	1.9
	2012	16,700	81.8	47.4	20.7	9.2	3.3
Mathematics Extension 1	2015	8,954	65.6	35.8	15.7	6.0	1.7
	2014	9,022	69.6	36.8	15.4	5.8	1.9
	2013	8,839	67.2	36.9	16.3	6.5	2.0
	2012	8,925	64.4	35.1	14.9	5.5	1.7
Mathematics Extension 2	2015	3,333	63.9	31.7	13.7	5.0	1.5
	2014	3,371	68.5	35.2	13.5	5.0	1.3
	2013	3,198	66.0	33.8	12.8	4.3	1.6
	2012	3,454	61.9	30.7	11.5	4.2	1.2

#### Table 5.4 Distributions of HSC marks for English and Mathematics courses: 2012–2015

	Veer	Envolvent	Percentage of students with scaled mark less than:						
	rear	Enroiment	45	40	35	30	25	20	
English Standard	2015	31,501	99.9	99.5	96.9	89.2	74.9	54.3	
	2014	31,483	99.9	99.6	97.2	90.0	75.9	55.8	
	2013	31,495	99.9	99.3	96.5	89.6	76.0	55.8	
	2012	31,803	99.9	99.3	96.5	89.7	77.3	57.3	
English Advanced	2015	26,002	96.8	82.4	60.1	36.9	18.4	7.6	
	2014	26,729	97.6	83.4	60.3	37.1	19.2	8.1	
	2013	27,007	97.5	83.1	60.5	37.2	20.6	9.3	
	2012	27,217	97.8	83.3	60.8	39.2	21.8	9.2	
English Extension 1	2015	4,512	92.6	64.0	33.2	15.7	6.3	2.5	
	2014	4,848	92.8	67.1	38.3	17.4	6.1	1.9	
	2013	5,007	97.4	77.1	42.7	16.4	5.2	1.8	
	2012	5,265	96.9	74.6	41.1	17.8	6.6	2.4	
English Extension 2	2015	1,631	89.8	66.2	39.2	18.4	7.0	1.9	
	2014	1,776	90.0	68.8	41.6	20.0	8.2	2.2	
	2013	1,907	95.5	76.5	46.0	20.2	6.9	1.9	
	2012	2,126	94.7	75.0	45.3	18.3	5.4	1.0	
ESL	2015	2,368	<b>9</b> 8.6	93.8	<b>8</b> 5.6	75.0	60.5	45.7	
	2014	2,291	98.3	93.6	85.0	73.9	59.7	44.8	
	2013	2,410	98.8	94.4	85.0	73.7	60.0	46.1	
	2012	2,513	<b>98</b> .5	<b>93</b> .5	85.1	72.7	59.3	44.9	
Mathematics General 2	2015	31,511	99.9	96.9	87.8	75.5	61.5	46.4	
	2014	31,321	99.9	97.5	88.4	75.4	60.9	45.6	
	2013	32,376	99.9	97.8	89.1	76.1	61.3	46.0	
	2012	31,702	99.9	97.8	89.4	76.7	62.9	47.4	
Mathematics	<b>20</b> 15	16,450	95.0	80.4	59.4	39.2	23.6	14.1	
	2014	16,693	95.3	78.4	59.0	40.4	25.3	14.5	
	2013	16,463	98.3	84.4	60.5	38.6	22.7	12.6	
	2012	16,700	96.3	81.3	61.6	41.7	25.8	14.7	
Mathematics Extension 1	2015	8,954	80.1	48.3	24.0	10.2	4.2	1.4	
	2014	9,022	81.6	47.3	21.9	9.3	3.9	1.6	
	2013	8,839	78.2	43.4	21.6	10.4	4.7	1.9	
	2012	8,925	81.3	48.8	24.4	10.4	4.0	1.3	
Mathematics Extension 2	2015	3,333	61.6	19.8	6.8	2.4	0.8	0.2	
	2014	3,371	63.9	18.2	5.6	1.8	0.6	0.3	
	2013	3,198	54.3	15.7	4.8	1.9	0.9	0.3	
	2012	3,454	64.8	19.5	5.8	2.1	0.7	0.2	

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

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

If students complete only 10 units all courses must be counted in the calculation of the ATAR, whereas if students complete more than 10 units at least one unit *will* be omitted. In 2015, 32,789 students out of the 55,736 ATAR eligible students (58.8 per cent) presented exactly 10 units.

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

For each course:

- The first column shows the total number of students who did the course in any year and received an ATAR in 2015.
- The second column shows the number of these students who completed more than 10 units.
- The third column expresses this number as a percentage.

The fourth column gives the percentage of these students who counted all units of that course towards their ATAR. The percentage is based on the number of students in the course who had completed more than 10 units.

The final column shows the maximum ATAR of any student doing the course in any year and including **all** units of that course in the ATAR calculation.

Of the 106 courses listed in Table A6, 76 have 70 per cent or more of their students counting the course. The data also show that, while there are differences in the percentages of students who count a particular course towards their ATARs, there is no evidence of systematic differences across Key Learning Areas.

## 6 Frequently asked questions

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

### 6.1 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 68.70, which is lower than the median score for almost all courses. So for students in the middle of the candidature the ATAR will typically be lower than their average HSC mark.

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

#### Example 1

Consider the following two students, Liam and Kellie, whose HSC marks are shown in Table 6.1. These students are middle students (the 50th percentile) in all of their courses. Their average HSC marks per unit are similar, 38.7 and 39.0 respectively, but their ATARs are quite different, 55.90 and 81.60 respectively.

	Liam				
ATAR	Course	HSC mark per course	HSC mark per unit		
55.90	Dance	78	39.0		
	English Standard	68	34.0		
	Music 1	82	41.0		
	Society and Culture	79	39.5		
	Visual Arts	80	40.0		

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

	Kellie				
ATAR	Course	HSC mark per course	HSC mark per unit		
81.60	Chemistry	77	38.5		
	Economics	78	39.0		
	English Advanced	81	40.5		
	Mathematics	80	40.0		
	Physics	74	37.0		

Both Liam and Kellie are at the 50th percentile in all of their courses so the reason for the difference in their ATARs is the difference in the strength of the competition in the courses they have chosen. The average scaled mean for Liam's courses was 21.9 whereas the average scaled mean for Kellie's courses was 31.5. Kellie has competed against students who have demonstrated higher academic achievement.

#### Example 2

Consider the following two students, James and Amy, whose HSC marks are shown in Table 6.2. Their average HSC marks per unit are similar, 38.9 and 38.2 respectively, but their ATARs are quite different, 65.00 and 75.00 respectively.

	James				
ATAR	Course	HSC mark per course	HSC mark per unit		
65.00	Business Studies	79	39.5		
	Dance	70	35.0		
	English Standard	79	39.5		
	Industrial Technology	76	38.0		
	Mathematics General 2	85	42.5		

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

	Amy				
ATAR	Course	HSC mark per course	HSC mark per unit		
75.00	Biology	78	39.0		
	Chemistry	73	36.5		
	English Advanced	79	39.5		
	Mathematics	76	38.0		
	French Continuers	76	38.0		

Amy has an ATAR that is almost the same as her average HSC course score (76.4) whereas James's ATAR is much lower than his average HSC course score (77.8). In fact his average HSC score is higher than Amy's. If we look at Table A3 the average of the scaled means of the courses taken by James is 21.0 whereas for the average scaled mean for the courses taken by Amy is 31.3.

#### Example 3

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

Table 6.3	Two examples of st	tudent achievement:	Fred and Laura
-----------	--------------------	---------------------	----------------

	Fred		Laura	
Course	HSC mark per unit	Percentile	HSC mark per unit	Percentile
Biology	35.0	43	40.0	75
Business Studies	35.0	36	40.0	67
English Advanced	35.0	11	40.0	47
Mathematics	35.0	21	40.0	51
Modern History	35.0	30	40.0	59
Visual Arts	35.0	14	40.0	51
ATAR	57.50		79	9.65

Their HSC marks per unit in each course differ by only 5, yet their ATARs differ by 22.15. Laura's ATAR is similar to her HSC course marks (80 per course) while Fred's ATAR is much lower than his HSC course marks (70 per course).

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

The courses and HSC marks shown for Fred and Laura are the same as in 2014. While their HSC marks are the same the percentiles (their positions in their courses) have changed because of the changes in the distributions of HSC marks, so their ATARs are different. Table 6.4 presents their ATARs for 2009 to 2015.

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

#### Table 6.4 ATARs for Fred and Laura: 2009–2015

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

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

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

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

They show that a student's position in their course and the scaled means and standard deviations of their courses are all important in determining which of their courses contribute towards their ATAR.

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

#### Example 1 – Scaled means

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

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

#### Table 6.5 HSC and scaled marks

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

A student in Biology with an HSC mark of 43.5 can receive a higher scaled mark than a student in Ancient History or Business Studies with an HSC mark of 44.5 due to the differences in the strength of the competition reflected in the scaled means.

Notice also that the course with the highest HSC mark, Visual Arts, has the lowest scaled mark.

The HSC mark on its own does not give a clear indication of the contribution a course makes towards a student's aggregate.

#### Example 2 – Position

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

	Scaled mean	Scaled SD	Percentile	HSC mark per unit	Scaled mark
Geography	25.3	11.1	P99	47.5	46.3
French Continuers	35.1	8.6	P <sub>90</sub>	47.5	45.2

#### Table 6.6 HSC and scaled marks

#### 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.

			P <sub>90</sub>		
Course	Scaled mean	Scaled SD	HSC mark per unit	Scaled mark	
Music 1	21.1	10.5	46.0	35.7	
Arabic Extension	23.9	6.6	46.0	32.6	

Table 6.7	HSC and s	scaled marks
Table 6.7	HSC and s	scaled marks

Consider students at the 90th percentile of Music 1 with HSC mark 46.0 per unit and scaled mark of 35.7 per unit and at the 90th percentile of Arabic Extension with HSC mark of 46.0 and scaled mark of 32.6. Arabic Extension has a scaled mean of 23.9 whereas Music 1 has a scaled mean of 21.1.

The course with the lower scaled mean has the higher scaled mark corresponding to the HSC mark of 46.0 even though the position is the same in both courses. The reason the scaled marks differ is the spread in the distribution as measured by the standard deviation (SD). Arabic Extension has a SD of 6.6 but Music 1 has a SD of 10.5. Music 1 has a candidature with more varied academic ability than Arabic Extension.

#### Example 4 – Raw vs HSC marks

As noted in Section 4.6 there is not necessarily a unique scaled mark for each HSC mark. From Table A3, by focusing on the maximum mark and the 99th and 90th percentiles, we see that candidates receiving the top HSC mark of 50 in Music Extension received scaled marks from 50.0 to 48.6. The top HSC mark in a course does not necessarily reflect the top raw mark in a course and so a candidate with HSC mark of 50 may not receive the top scaled mark.

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

### 6.3 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 of Studies, Teaching and Educational Standards NSW; no other information is used.

#### Does my postcode matter?

No.

#### Are certain courses always 'scaled down'?

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

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

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

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

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

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

There are two reasons. The first is the ATAR is a rank that indicates your position in 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. However, since you are being compared with a different cohort your ATAR may increase, remain the same or decrease.

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

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

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

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

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

## 7 Appendix

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

- Arabic Beginners
- Classical Greek Extension
- Croatian
- Dutch
- Hungarian
- Heritage Indonesian
- Khmer
- Malay Background Speakers
- Maltese
- Swedish
- Ukrainian.

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

Table A1	Course enrolments, gender, ATAR eligibility and maximum ATAR by course Excludes courses with less than 10 students.
Table A2	Distributions of 2015 HSC marks by course Excludes courses with less than 10 students.
Table A3	Descriptive statistics and selected percentiles for HSC marks and scaled marks by course <i>Excludes courses with less than 10 students or less than four ATAR-eligible students and no percentile data are given for courses with less than 40 students.</i>
Table A4	Distributions of HSC marks by course: 2015 and 2014 Excludes courses with less than 40 students in either year.
Table A5	Distributions of scaled marks by course: 2015 and 2014 Excludes courses with less than 40 students in either year.
Table A6	Courses that contribute to the ATAR (more than 10 units) Excludes courses with less than 10 students.
Table A7	ATAR distribution

- Table A8ATAR percentiles: 2011–2015
- Table A9Relationship between the ATAR and aggregates: 2011–2015

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

- Notes: (i) The Number all column includes students who have completed the course in 2015 or in a previous year (and who have done at least one ATAR course in 2015).
  - (ii) The Number HSC column shows the number of students who completed the course in 2015 or in a previous year and received an HSC award in 2015.
  - (iii) The Number ATAR column shows the number of students who completed the course in 2015 or in a previous year and who were eligible for an ATAR in 2015.
  - (iv) The % female column shows the percentage of students in the course who were female.
  - (v) The % HSC column shows the percentage of students in the course who received an HSC award in 2015.
  - (vi) The % ATAR eligible column shows the percentage of students in the course who were eligible for an ATAR in 2015.
  - (vii) The Maximum ATAR column shows the maximum ATAR achieved by a student doing the course.
  - (viii) The table excludes courses with less than 10 students.

Course	Number all	Number HSC	Number ATAR	% Female	% HSC	% ATAR eligible	Maximum ATAR
Aboriginal Studies	443	383	216	69.5	86.5	48.8	99.95
Agriculture	1,433	1,337	1,048	49.8	93.3	73.1	99.95
Ancient History	10,923	10,594	9,765	57.5	97.0	89.4	99.95
Biology	17,647	17,150	16,638	61.0	97.2	94.3	99.95
Business Studies	16,844	16,319	15,226	47.5	96.9	90.4	99.95
Chemistry	11,140	10,891	10,841	45.0	97.8	97.3	99.95
Community and Family Studies	8,062	7,874	6,344	92.1	97.7	78.7	98.40
Dance	926	885	775	95.5	95.6	83.7	98.65
Design and Technology	3,226	3,090	2,687	40.3	95.8	83.3	99.05
Drama	4,681	4,536	4,073	68.8	96.9	87.0	99.85
Earth and Environmental Science	1,508	1,463	1,334	40.7	97.0	88.5	99.85
Economics	5,161	5,094	5,080	35.1	98.7	98.4	99.95
Engineering Studies	2,083	2,039	1,985	5.1	97.9	95.3	99.85
English Standard	31,946	30,988	27,695	48.3	97.0	86.7	99.35
English Advanced	26,273	25,968	25,836	58.9	98.8	98.3	99.95
English Extension 1	4,546	4,513	4,503	69.2	99.3	99.1	99.95
English Extension 2	1,638	1,633	1,627	72.3	99.7	99.3	99.95
ESL	2,414	2,321	2,205	49.9	96.1	91.3	99.95
Food Technology	3,402	3,289	2,658	75.8	96.7	78.1	99.35
Geography	4,353	4,188	3,885	44.8	96.2	89.2	99.85
Industrial Technology	5,641	5,439	3,820	12.2	96.4	67.7	98.65
Information Processes and Technology	3,047	2,772	2,513	19.4	91.0	82.5	99.95
Legal Studies	10,405	10,135	9,625	60.1	97.4	92.5	99.95
Mathematics General 2	32,022	31,168	28,008	49.9	97.3	87.5	99.85
Mathematics	17,044	15,474	15,423	46.0	90.8	90.5	99.95
Mathematics Extension 1	9,251	8,799	8,797	41.5	95.1	95.1	99.95
Mathematics Extension 2	3,372	3,302	3,302	36.2	97.9	97.9	99.95
Modern History	11,209	10,937	10,327	53.7	97.6	92.1	99.95
History Extension	1,883	1,877	1,877	64.2	99.7	99.7	99.95
Music 1	4,837	4,586	3,907	49.6	94.8	80.8	99.45
Music 2	733	694	693	50.1	94.7	94.5	99.95
Music Extension	438	434	433	53.0	99.1	98.9	99.95
PDHPE	15,263	14,878	13,598	53.2	97.5	89.1	99.90
Physics	9,619	9,433	9,373	22.1	98.1	97.4	99.95
Senior Science	6,387	6,226	5,086	45.4	97.5	79.6	99.05
Society and Culture	4,668	4,490	4,187	79.7	96.2	89.7	99.90

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

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

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

Course	Number all	Number HSC	Number ATAR	% Female	% HSC	% ATAR eligible	Maximum ATAR
Modern Hebrew	51	47	47	56.9	92.2	92.2	99.65
Persian	33	27	27	42.4	81.8	81.8	94.45
Polish	18	15	13	61.1	83.3	72.2	94.85
Portuguese	14	14	14	71.4	100.0	100.0	91.10
Russian	27	26	26	66.7	96.3	96.3	99.00
Serbian	17	17	16	64.7	100.0	94.1	99.90
Spanish Beginners	179	171	166	71.5	95.5	92.7	99.85
Spanish Continuers	151	148	141	70.9	98.0	93.4	99.75
Spanish Extension	47	47	46	68.1	100.0	97.9	98.25
Swedish	17	9	9	64.7	52.9	52.9	93.75
Tamil	64	31	31	68.8	48.4	48.4	98.85
Turkish	51	35	34	58.8	68.6	66.7	95.75
Vietnamese	147	135	124	59.2	91.8	84.4	99.95
Automotive Exam	493	395	179	7.7	80.1	36.3	87.65
Business Services Exam	1,202	1,082	888	75.8	90.0	73.9	97.80
Construction Exam	1,738	1,611.	1,071	2.3	92.7	61.6	94.55
Electrotechnology Exam	301	279	177	3.0	92.7	58.8	95.15
Entertainment Industry Exam	933	915	829	61.0	98.1	88.9	97.10
Financial Services Exam	158	151	149	48.1	95.6	94.3	99.80
Hospitality Exam	5,467	5,046	4,364	74.6	92.3	79.8	99.15
Human Services Exam	596	579	492	91.3	97.1	82.6	95.65
Information and Digital Technology Exam	975	854	742	12.3	87.6	76.1	99.30
Metal and Engineering Exam	622	542	307	2.4	87.1	49.4	88.90
Primary Industries Exam	645	598	396	49.6	92.7	61.4	96.20
Retail Services Exam	1,143	1,019	819	71.3	89.2	71.7	97.80
Tourism Travel and Events Exam	340	335	280	88.8	98.5	82.4	96.25
Total	72,238	65,279	55,736	51.4	90.4	77.2	99.95

#### Table A2 Distributions of 2015 HSC marks by course

- Notes: (i) The Number column shows the number of students who completed the course in 2015.
  - (ii) The Median HSC mark column shows the median HSC mark per course.
  - (iii) The Median Band column indicates the Performance Band in which the median HSC mark lies.
  - (iv) The Percentage of Students in Performance Band columns show the percentage of a course candidature in each of the Performance Bands 6 to 2. Extension courses show only Bands 4 to 2 as they have four Bands only: E1 to E4.
  - (v) This table excludes courses with less than 10 students.

0.01100	Numbor	Median	Median	Percentage students in Performance Band						
Course	Number	HSC mark	Band	6	5	4	3	2		
Aboriginal Studies	400	67	3	6	18	21	21	24		
Agriculture	1,344	73	4	7	22	32	24	13		
Ancient History	10,748	74	4	8	25	28	22	10		
Biology	17,269	73	4	6	22	32	24	11		
Business Studies	16,561	75	4	8	28	30	22	9		
Chemistry	10,905	77	4	11	30	32	20	5		
Community and Family Studies	7,957	75	4	6	27	33	21	10		
Dance	901	78	4	12	33	33	19	2		
Design and Technology	3,148	77	4	12	25	43	16	4		
Drama	4,593	78	4	14	28	40	16	2		
Earth and Environmental Science	1,468	77	4	8	35	29	19	7		
Economics	5,089	78	4	11	35	29	18	5		
Engineering Studies	2,054	76	4	9	28	34	23	5		
English Standard	31,501	68	3	<1	8	34	42	12		
English Advanced	26,002	81	5	15	42	33	8	1		
English Extension 1	4,512	43	E3			35	60	6		
English Extension 2	1,631	41	E3			26	56	17		
ESL	2,368	73	4	4	22	35	22	12		
Food Technology	3, <b>361</b>	72	4	8	21	28	23	16		
Geography	4,275	77	4	9	33	25	21	9		
Industrial Technology	5,512	71	4	8	18	28	24	15		
Information Processes and Technology	2,814	75	4	7	26	34	19	10		
Legal Studies	10,297	76	4	11	30	28	21	7		
Mathematics General 2	31,511	70	4	6	20	25	24	18		
Mathematics	16,450	80	5	20	33	28	10	6		
Mathematics Extension 1	8,954	42	E3			34	50	14		
Mathematics Extension 2	3,333	86	E3			36	50	12		
Modern History	11,053	78	4	12	32	29	18	6		
History Extension	1,878	40	E3			22	56	19		
Music 1	4,710	82	5	17	45	27	9	2		
Music 2	694	88	5	37	51	12	<1	<1		
Music Extension	424	46	E4			56	37	7		
PDHPE	15,082	73	4	9	21	33	28	7		
Physics	9,510	74	4	8	20	37	23	6		
Senior Science	6,320	73	4	8	21	33	24	10		
Society and Culture	4,566	79	4	12	35	34	14	3		

#### Table A2Distributions of 2015 HSC marks by course (continued)

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

#### Table A2Distributions of 2015 HSC marks by course (continued)

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

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

- Notes: (i) The Number column shows the number of students who completed the course in 2015.
  - (ii) The  $P_{99'}P_{90'}P_{75'}P_{50'}P_{25}$  columns refer to the 99th, 90th, 75th, 50th and 25th percentiles respectively.
  - (iii) The table excludes courses with less than 10 students or less than four ATAR-eligible students and no percentile data are given for courses with less than 40 students.
  - (iv) This table should not be used as a simple HSC to scaled mark conversion table. For each HSC mark there can be a range of raw marks and therefore a range of scaled marks.

Course	Number	Type of mark	Mean	SD	Max. mark	P99	P90	P75	P50	P25
Aboriginal Studies	400	HSC	33.5	7.8	48.0	47.0	44.0	39.5	33.5	28.5
		scaled	13.3	12.1	43.1	41.3	34.0	21.3	8.7	3.2
Agriculture	1,344	HSC	36.1	6.1	49.0	47.0	44.0	40.5	36.5	32.0
		scaled	19.9	11.5	47.1	43.3	36.6	28.6	18.9	10.5
Ancient History	10,748	HSC	35.9	7.2	49.5	48.0	44.5	41.0	37.0	32.0
		scaled	24.0	10.7	49.6	45.5	38.1	32.0	24.6	16.1
Biology	17,269	HSC	35.8	6.3	48.5	46.5	43.5	40.5	36.5	32.0
		scaled	26.5	10.0	50.0	45.1	39.2	34.1	27.2	19.3
Business Studies	16,561	HSC	37.0	6.1	49.0	47.0	44.5	41.5	37.5	33.0
		scaled	23.8	10.9	49.5	45.0	38.3	32.5	24.0	15.2
Chemistry	10,905	HSC	38.1	5.6	49.5	47.5	45.0	42.5	38.5	34.5
		scaled	31.6	9.6	50.0	47.1	43.1	39.2	32.9	25.2
Community and Family Studies	7,957	HSC	36.6	5.9	50.0	47.0	43.5	41.0	37.5	33.0
		scaled	19.0	10.4	44.4	40.2	33.8	27.3	18.4	10.2
Dance	901	HSC	38.8	5.4	50.0	48.0	45.5	43.0	39.0	35.0
		scaled	22.8	10.8	47.5	44.1	38.4	31.2	22.1	14.2
Design and Technology	3,148	HSC	38.4	4.8	49.5	48.0	45.0	41.5	38.5	35.5
		scaled	21.5	10.2	46.4	43.1	36.3	29.1	20.7	13.4
Drama	4,593	HSC	39.1	4.7	50.0	48.0	45.5	42.5	39.0	36.0
		scaled	23.8	10.5	49.4	45.8	38.5	31.7	23.5	15.7
Earth and Environmental Science	1,468	HSC	37.8	5.7	48.5	47.0	44.0	42.0	38.5	34.0
		scaled	23.4	10.3	47.8	43.7	36.9	31.4	23.3	15.1
Economics	5,089	HSC	38.3	5.9	49.0	47.5	45.0	42.5	39.0	34.5
		scaled	32.2	9.5	50.0	47.4	43.5	39.6	33.6	26.1
Engineering Studies	2,054	HSC	37.7	5.3	48.5	47.5	44.5	41.5	38.0	34.0
		scaled	25.4	9.7	48.2	45.0	38.3	32.6	25.6	18.2
English Standard	31,501	HSC	33.8	4.8	48.5	43.5	39.5	37.0	34.0	31.0
		scaled	19.5	8.0	48.5	38.4	30.3	25.0	19.1	13.5
English Advanced	26,002	HSC	40.4	4.1	49.5	47.5	45.5	43.5	40.5	38.0
		scaled	32.2	8.0	50.0	46.7	42.3	38.2	32.8	27.0
English Extension 1	4,512	HSC	42.2	4.3	50.0	48.0	47.0	45.0	43.0	40.0
		scaled	36.7	6.8	50.0	47.6	44.3	41.7	37.9	33.0
English Extension 2	1,631	HSC	40.1	5.7	50.0	50.0	47.0	45.0	41.0	36.0
		scaled	36.4	7.2	50.0	48.8	45.2	41.8	37.2	31.6
ESL	2,368	HSC	35.7	6.3	48.0	46.5	43.0	40.0	36.5	32.0
		scaled	21.9	11.1	48.8	45.9	37.4	30.0	21.3	13.2

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

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

Table A3	Descriptive statistics and	selected percentiles	for HSC marks and sc	aled marks by course	(continued)
----------	----------------------------	----------------------	----------------------	----------------------	-------------

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

Table A3	Descriptive statistics and selected	percentiles for HSC marks and	scaled marks by course	(continued)
101010110				0011011000

Course	Number	Type of mark	Mean	SD	Max. mark	P99	P90	P75	P50	P25
Indonesian Extension	16	HSC	40.6	4.8	47.0					
		scaled	36.5	6.3	50.0					
Indonesian Background Speakers	72	HSC	37.7	2.1	41.0	41.0	40.0	39.5	38.0	36.5
		scaled	32.9	6.8	46.5	46.5	40.6	38.2	33.3	28.6
Italian Beginners	361	HSC	36.5	8.4	49.0	48.5	46.5	43.0	37.5	31.5
		scaled	26.5	12.3	50.0	49.4	42.9	36.3	26.9	16.9
Italian Continuers	272	HSC	39.5	6.0	49.0	48.5	46.5	44.0	40.5	35.0
		scaled	31.2	9.0	50.0	48.2	42.9	37.3	31.7	24.7
Italian Extension	57	HSC	42.4	5.3	49.0	49.0	48.0	46.0	44.0	41.0
		scaled	36.7	7.8	50.0	50.0	45.9	42.3	37.7	33.2
Japanese Beginners	642	HSC	36.2	8.1	49.5	48.5	45.5	42.5	37.0	31.5
		scaled	23.7	11.3	48.2	45.3	37.9	32.9	24.1	15.3
Japanese Continuers	659	HSC	39.7	5.7	50.0	49.0	46.5	44.0	40.5	35.5
		scaled	31.2	9.5	50.0	47.7	42.9	39.0	32.0	24.4
Japanese Extension	208	HSC	41.1	5.3	49.0	48.0	47.0	46.0	42.0	38.0
		scaled	37.0	5.8	50.0	48.3	44.7	41.8	37.0	32.8
Japanese Background Speakers	19	HSC	40.4	3.8	47.0					
		scaled	20.5	1.0.7	44.5					
Heritage Japanese	20	HSC	42.0	3.6	46.5					
		scaled	27.5	9.8	47.5					
Korean Continuers	17	HSC	45.4	3.9	49.5					
		scaled	25.3	13.9	50.0					
Korean Background Speakers	54	HSC	40.6	4.6	49.0	49.0	46.0	43.5	41.5	38.0
		scaled	24.2	11.8	50.0	50.0	39.9	30.4	24.9	15.3
Heritage Korean	64	HSC	44.3	3.6	49.0	49.0	47.5	46.5	45.5	42.0
		scaled	27.4	11.2	50.0	50.0	39.6	34.7	30.0	17.4
Latin Continuers	194	HSC	43.7	4.6	49.5	49.5	48.0	47.0	45.0	41.0
		scaled	40.1	8.0	50.0	50.0	47.9	45.9	41.8	36.4
Latin Extension	129	HSC	45.6	3.8	50.0	50.0	49.0	48.0	47.0	45.0
		scaled	42.5	6.0	50.0	50.0	48.7	46.4	44.2	40.9
Macedonian	17	HSC	43.5	3.2	47.5					
		scaled	30.7	11.7	50.0					
Modern Greek Beginners	69	HSC	41.7	5.9	49.5	49.5	48.5	46.0	42.5	39.0
		scaled	27.1	10.6	46.5	46.5	41.2	34.1	27.8	21.4
Modern Greek Continuers	95	HSC	41.7	4.1	48.5	48.5	47.0	45.0	42.0	39.0
		scaled	25.2	10.9	48.9	48.9	41.4	32.9	23.9	17.0
Modern Greek Extension	43	HSC	43.7	4.2	50.0	50.0	49.0	47.0	45.0	39.0
		scaled	31.5	8.7	49.5	49.5	42.8	38.9	31.6	22.8
Modern Hebrew	39	HSC	44.5	2.8	49.0					
		scaled	33.7	8.5	50.0					
Persian	31	HSC	39.0	4.5	49.0					
		scaled	16.9	10.7	43.3					
Polish	17	HSC	45.2	4.6	49.5					
		scaled	28.6	13.7	50.0					

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

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

### Table A4 Distributions of HSC marks by course: 2015 and 2014

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

- (ii) Columns 45, 40, 35, 30 and 25 show the percentage of the course candidature with an HSC mark less than the specified mark.
- (iii) The table excludes courses with less than 40 students in either year.

Course	Voor	Numbor	Perce	entage of stu	dents with F	ISC mark les	s than:
Course	Teal	Number	45	40	35	30	25
Aboriginal Studies	2015	400	93.8	75.8	54.8	33.5	10.0
	2014	410	91.2	79.8	55.6	28.3	10.0
Agriculture	2015	1,344	92.7	71.1	39.4	15.4	2.8
	2014	1,372	93.4	74.8	44.1	19.5	4.6
Ancient History	2015	10,748	92.0	67.1	38.9	16.7	6.8
	2014	11,198	91.3	66.9	38.2	16.3	6.3
Biology	2015	17,269	94.2	71.9	40.0	15.7	4.5
	2014	17,138	94.2	71.6	37.8	13.8	4.3
Business Studies	2015	16,561	91.5	63.7	33.3	11.5	2.9
	2014	15,991	91.1	62.7	32.3	11.6	2.4
Chemistry	2015	10,905	89.2	58. <b>8</b>	26.4	6.5	1.7
	2014	11,173	88.3	53.7	24.3	8.1	2.9
Community and Family Studies	2015	7,957	94.2	67.6	34.3	1.3.4	3.1
	2014	7,687	94.3	62.9	28.9	8.5	1.8
Dance	2015	901	88.1	54.7	22.1	3.4	1.4
	2014	920	87.2	56.3	23.0	2.9	1.4
Design and Technology	2015	3,148	88.4	63.8	21.1	4.9	0.4
	2014	3,121	89.1	62.7	24.6	4.8	0.5
Drama	2015	4,593	85.6	57.5	17.7	1.9	0.1
	2014	4,753	86.7	57.8	15.4	1.4	0.1
Earth and Environmental Science	2015	1,468	92.3	57.2	27.8	8.9	2.2
	2014	1,494	93.7	59.8	26.6	8.2	2.1
Economics	2015	5,089	88.6	53.9	25.1	7.6	2.4
	2014	5,131	89.1	55.3	27.0	8.6	2.0
Engineering Studies	2015	2,054	90.5	63.0	28.6	5.8	1.3
	2014	2,043	90.8	67.1	35.7	10.0	3.0
English Standard	2015	31,501	99.6	91.6	57.6	15.3	3.3
	2014	31,483	99.7	91.8	56.5	14.3	2.8
English Advanced	2015	26,002	84.6	42.1	8.8	0.9	0.2
	2014	26,729	85.3	40.6	8.4	0.8	0.2
English Extension 1	2015	4,512	65.4	22.5	5.7	0.9	0.2
	2014	4,848	69.4	29.3	6.8	1.1	0.3
English Extension 2	2015	1,631	73.8	42.8	17.5	4.0	0.3
	2014	1,776	76.8	49.2	22.5	6.8	1.7
ESL	2015	2,368	96.0	73.7	38.8	16.5	4.1
	2014	2,291	95.5	71.4	33.8	10.4	2.1
Food Technology	2015	3,361	91.7	71.0	43.4	20.9	4.5
	2014	3,538	92.5	70.9	44.4	19.9	3.3
Geography	2015	4,275	91.4	58.4	33.2	12.6	4.1
	2014	4,418	92.5	56.0	30.6	14.9	6.1

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

0.0.000	Veer	Numero	Perce	entage of stu	dents with H	ISC mark les	s than:
Course	rear	Number	45	40	35	30	25
Industrial Technology	2015	5,512	91.7	73.3	44.8	20.8	5.8
	2014	5,360	91.0	71.5	42.4	17.4	5.5
Information Processes and Technology	2015	2,814	93.0	67.4	33.5	14.7	4.9
	2014	2,756	92.7	71.3	32.4	11.4	3.0
Legal Studies	2015	10,297	89.2	59.4	31.3	10.1	2.6
	2014	10,052	87.3	59.8	33.7	15.2	6.4
Mathematics General 2	2015	31,511	94.3	74.1	49.5	25.1	7.5
	2014	31,321	94.5	74.7	48.7	24.0	6.4
Mathematics	2015	16,450	80.3	47.5	19.1	9.2	3.1
	2014	16,693	78.2	46.1	18.3	8.5	3.5
Mathematics Extension 1	2015	8,954	65.6	35.8	15.7	6.0	1.7
	2014	9,022	69.6	36.8	.15.4	5.8	1.9
Mathematics Extension 2	2015	3,333	63.9	31.7	13.7	5.0	1.5
	2014	3,371	68.5	35.2	13.5	5.0	1.3
Modern History	2015	11,053	88.4	55.9	27.4	9.8	3.5
	2014	10,306	91.3	57.4	24.7	9.9	4.2
History Extension	2015	1,878	78.0	49.8	21.7	6.5	2.3
	2014	1,934	77.6	48.8	22.1	5.4	1.7
Music 1	2015	4,710	83.2	37.8	11.0	2.0	0.2
	2014	5,002	81.6	40.0	10.9	2.4	0.9
Music 2	2015	694	63.4	12.0	0.3	0.1	0.0
	2014	765	66.0	12.7	0.8	0.0	
Music Extension	2015	424	43.6	18.4	6.8	1.2	0.0
	2014	475	25.1	4.6	0.8	0.4	0.0
PDHPE	2015	15,082	91.3	70.2	37.4	9.0	1.6
	2014	14,396	91.5	69.3	36.6	11.1	2.3
Physics	2015	9,510	91.6	71.1	33.6	10.2	4.3
	2014	9,598	91.4	68.7	33.3	8.8	2.2
Senior Science	2015	6,320	92.4	71.5	38.9	15.1	5.3
	2014	6,328	92.2	63.1	30.3	9.8	2.4
Society and Culture	2015	4,566	88.2	52.9	19.3	5.2	1.8
	2014	4,398	87.4	54.9	22.1	6.3	1.8
Software Design and Development	2015	1,783	91.5	69.3	32.5	10.5	1.6
	2014	1,719	93.0	71.7	33.4	8.8	2.0
Studies of Religion I	2015	8,951	87.3	49.0	22.0	4.4	0.7
	2014	9,299	87.9	51.1	23.9	5.9	1.1
Studies of Religion II	2015	5,902	93.6	59.7	28.9	10.0	3.4
	2014	5,464	91.7	55.6	25.7	9.2	2.7
Textiles and Design	2015	1,635	84.6	52.4	20.3	5.3	1.0
	2014	1,874	86.6	58.1	28.0	7.6	1.7
Visual Arts	2015	9,003	87.3	46.4	12.0	1.7	0.3
	2014	9,071	89.3	51.2	14.5	2.5	0.2
Arabic Continuers	2015	182	89.6	42.3	14.8	4.9	1.6
	2014	211	92.4	43.6	22.7	10.9	7.1

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

Cauraa	Veer	Numero	Percentage of students with HSC mark less           45         40         35         30           3         77.4         50.9         24.5         3.8           3         82.5         63.5         25.4         0.0			s than:	
Course	Year	Number	45	40	35	Nits with HSC mark less than:35302524.53.80.025.40.00.010.82.90.010.82.40.010.82.40.04.11.20.31.30.60.22.40.00.02.40.00.02.40.00.02.40.00.02.40.01.02.50.61.13.02.50.611.02.61.19.03.60.05.01.00.018.05.42.713.04.30.014.44.00.02.91.51.53.30.0-22.26.30.04.70.0-11.10.0-14.72.90.039.116.96.142.721.77.415.83.50.039.118.27.332.614.03.822.63.81.121.34.00.6	
Arabic Extension	2015	53	77.4	50.9	24.5	3.8	0.0
	2014	63	82.5	63.5	25.4	0.0	
Chinese Continuers	2015	102	46.1	31.4	10.8	2.9	0.0
	2014	83	72.3	32.5	10.8	2.4	0.0
Chinese Background Speakers	2015	660	87.0	31.2	4.1	1.2	0.3
	2014	635	87.1	31.2	1.3	0.6	0.2
Heritage Chinese (Mandarin)	2015	127	73.2	18.1	2.4	0.0	
	2014	121	69.4	19.0	6.6	3.3	0.0
French Beginners	2015	647	78.4	55.6	28.9	12.7	4.8
	2014	677	80.9	53.0	26.0	10.2	5.6
French Continuers	2015	727	69.3	33.7	13.2	2.5	0.6
	2014	799	65.2	34.3	.1 1.0	2.6	1.1
French Extension	2015	166	63.9	29.5	9.0	3.6	0.0
	2014	200	60.5	21.0	5.0	1.0	0.0
German Beginners	2015	111	69.4	45.9	18.0	5.4	2.7
	2014	69	58.0	39.1	13.0	4.3	0.0
German Continuers	2015	238	77.3	43.3	16.0	4.6	0.8
	2014	277	70.4	42.2	14.4	4.0	0.0
German Extension	2015	68	66.2	25.0	2.9	1.5	1.5
	2014	61	68.9	29.5	3.3	0.0	
Indonesian Continuers	2015	63	71.4	44.4	22.2	6.3	0.0
	2014	64	71.9	35.9	4.7	0.0	
Indonesian Background Speakers	2015	72	100.0	83.3	11.1	0.0	
	2014	68	98.5	80.9	14.7	2.9	0.0
Italian Beginners	2015	361	83.1	59.6	39.1	16.9	6.1
	2014	351	88.0	65.2	42.7	21.7	7.4
Italian Continuers	2015	272	79.4	46.7	23.2	3.7	1.1
	2014	298	77.5	42.3	18.5	6.0	2.7
Italian Extension	2015	57	59.6	21.1	15.8	3.5	0.0
	2014	67	77.6	56.7	20.9	4.5	0.0
Japanese Beginners	2015	642	86.9	61.7	39.1	18.2	7.3
	2014	687	86.6	58.7	32.6	14.0	3.8
Japanese Continuers	2015	659	81.0	45.4	22.6	3.8	1.1
	2014	624	82.9	42.0	21.3	4.0	0.6
Japanese Extension	2015	208	66.8	35.1	12.0	1.9	1.0
	2014	191	70.7	28.3	3.7	0.0	
Korean Background Speakers	2015	54	81.5	37.0	7.4	3.7	0.0
	2014	63	84.1	49.2	15.9	3.2	0.0
Latin Continuers	2015	194	47.9	17.5	5.2	2.1	0.0
	2014	161	56.5	25.5	7.5	5.0	0.0
Latin Extension	2015	129	22.5	8.5	2.3	0.0	
	2014	105	41.9	16.2	2.9	1.0	1.0
Modern Greek Beginners	2015	69	65.2	29.0	13.0	5.8	0.0
	2014	47	57.4	38.3	17.0	10.6	8.5

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

0	Maar	Niccosteres	Perce	entage of stu	dents with F	ISC mark les	s than:
Course	rear	Number	45	40	35	30	25
Modern Greek Continuers	2015	95	73.7	32.6	4.2	0.0	
	2014	102	71.6	33.3	2.9	1.0	0.0
Modern Greek Extension	2015	43	48.8	25.6	0.0		
	2014	47	44.7	25.5	10.6	6.4	0.0
Spanish Beginners	2015	177	89.8	58.2	23.2	4.0	0.0
	2014	202	85.1	63.4	31.7	10.9	2.0
Spanish Continuers	2015	150	93.3	56.7	26.7	4.7	0.7
	2014	169	88.8	54.4	21.3	7.1	0.6
Spanish Extension	2015	46	87.0	37.0	8.7	2.2	0.0
	2014	49	83.7	49.0	16.3	2.0	0.0
Vietnamese	2015	145	95.2	57.2	9.7	2.1	0.0
	2014	140	94.3	69.3	20.7	2.1	1.4
Automotive Exam	2015	463	98.7	86.6	59.4	21.2	1.7
	2014	415	98.3	90.4	60.2	18.3	0.7
Business Services Exam	2015	1,140	96.4	70.3	38.1	8.5	1.5
	2014	1,141	97.7	75.6	39.8	13.3	3.5
Construction Exam	2015	1,637	99.0	81.2	34.6	11.3	0.8
	2014	1,631	99.8	82.2	36.5	5.2	0.6
Electrotechnology Exam	2015	283	99.3	89.4	49.8	14.5	3.2
	2014	305	99.3	89.8	45.2	13.4	1.0
Entertainment Industry Exam	2015	918	98.7	76.1	38.0	4.5	0.7
	2014	911	96.9	81.4	40.0	8.7	1.8
Financial Services Exam	2015	152	90.1	69.1	32.9	8.6	2.6
	2014	229	93.9	66.4	29.7	10.0	1.3
Hospitality Exam	2015	5,180	95.9	66.8	25.4	3.6	0.5
	2014	5,559	95.2	64.1	27.0	4.2	0.7
Human Services Exam	2015	585	98.6	82.2	39.7	10.4	0.5
	2014	576	98.4	83.7	35.2	7.1	0.0
Information and Digital Technology Exam	2015	903	98.5	85.5	38.4	5.8	0.8
	2014	1,015	98.3	76.7	28.2	9.2	1.4
Metal and Engineering Exam	2015	565	99.8	92.9	68.7	19.8	1.8
	2014	756	99.1	89.7	55.2	22.6	6.1
Primary Industries Exam	2015	603	96.5	67.7	27.2	8.1	1.0
	2014	614	95.4	73.3	21.8	5.4	1.5
Retail Services Exam	2015	1,072	99.6	78.7	35.7	10.3	1.1
	2014	1,024	99.6	81.3	40.3	12.8	1.5
Tourism Travel and Events Exam	2015	338	98.8	74.3	26.3	10.4	0.9
	2014	331	96.4	70.1	22.1	3.0	0.3

### Table A5 Distributions of scaled marks by course: 2015 and 2014

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

- (ii) Columns 45, 40, 35, 30, 25, 20 and 15 show the percentage of the course candidature with a scaled mark less than the specified mark.
- (iii) The table excludes courses with less than 40 students in either year.

Course	Voor	Number		less than:					
Course	rear	Number	45	40	35	30	25	20	15
Aboriginal Studies	2015	400	100.0	97.3	91.5	85.0	80.0	73.3	64.0
	2014	410	100.0	94.9	89.8	85.9	81.5	75.4	65.6
Agriculture	2015	1,344	99.6	94.5	87.4	77.2	66.5	53.4	39.1
	2014	1,372	99.3	94.8	88.0	78.1	66.9	54.3	40.4
Ancient History	2015	10,748	98.8	93.6	83.4	68.5	51.3	35.5	22.5
	2014	11,198	98.6	92.6	82.0	67.7	50.1	34.6	21.5
Biology	2015	17,269	98.9	91.9	77.8	60.0	42.4	26.9	15.0
	2014	17,138	98.9	91.8	77.4	59.5	42.0	26.6	14.8
Business Studies	2015	16,561	99.2	93.2	81.7	68.0	52.9	37.8	24.5
	2014	15,991	99.3	93.6	82.3	68.3	52.9	38.1	24.4
Chemistry	2015	10,905	95.4	78.5	58.7	39.3	24.6	13.7	6.3
	2014	11,173	96.3	78.4	56.8	39.1	24.8	14.3	7.1
Community and Family Studies	2015	7,957	100.0	98.8	92.1	82.0	69.1	54.8	39.7
	2014	7,687	100.0	98.9	92.4	82.0	69.4	54.5	39.1
Dance	2015	901	99.4	92.6	83.9	71.9	60.0	43.8	27.9
	2014	920	98.4	91.3	83.0	72.8	60.8	45.3	27.5
Design and Technology	2015	3,148	99.8	96.6	87.6	77.5	63.9	47.6	30.2
	2014	3,121	99.4	95.1	87.7	76.4	62.6	47.8	33.1
Drama	2015	4,593	98.4	92.7	83.3	70.4	55.3	38.6	23.1
	2014	4,753	98.8	93.1	83.3	70.4	55.7	39.7	22.7
Earth and Environmental Science	2015	1,468	99.4	94.5	85.4	69.9	55.2	38.6	24.4
	2014	1,494	99.1	93.6	83.7	68.2	50.3	34.9	21.5
Economics	2015	5,089	94.7	77.0	55.7	36.5	22.0	12.1	5.9
	2014	5,131	96.9	78.5	54.2	33.9	20.8	12.2	6.4
Engineering Studies	2015	2,054	99.0	93.2	81.6	65.5	48.3	30.6	16.0
	2014	2,043	98.8	93.1	81.9	66.1	48.7	29.5	13.8
English Standard	2015	31,501	99.9	99.5	96.9	89.2	74.9	54.3	31.4
	2014	31,483	99.9	99.6	97.2	90.0	75.9	55.8	33.2
English Advanced	2015	26,002	96.8	82.4	60.1	36.9	18.4	7.6	2.4
	2014	26,729	97.6	83.4	60.3	37.1	19.2	8.1	2.8
English Extension 1	2015	4,512	92.6	64.0	33.2	15.7	6.3	2.5	0.7
	2014	4,848	92.8	67.1	38.3	17.4	6.1	1.9	0.5
English Extension 2	2015	1,631	89.8	66.2	39.2	18.4	7.0	1.9	0.3
	2014	1,776	90.0	68.8	41.6	20.0	8.2	2.2	0.6
ESL	2015	2,368	98.6	93.8	85.6	75.0	60.5	45.7	30.7
	2014	2,291	98.3	93.6	85.0	73.9	59.7	44.8	30.7
Food Technology	2015	3,361	99.9	96.2	88.7	78.9	67.5	54.1	38.9
	2014	3,538	99.8	96.2	87.8	78.9	66.8	55.4	41.0
Geography	2015	4,275	98.0	90.9	78.0	62.2	46.3	32.3	20.8
	2014	4,418	98.5	90.8	78.4	63.1	47.6	33.4	21.4

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

Courso	Voor	NumberPercentage of students with scaled mark less that454035302520		less than:					
Course	rear	Number	45	40	35	30	25	20	15
Industrial Technology	2015	5,512	100.0	99.9	95.6	88.3	76.6	63.3	47.0
	2014	5,360	100.0	99.9	96.3	88.7	78.9	65.7	49.9
Information Processes and Technology	2015	2,814	99.6	95.7	87.7	75.9	61.2	45.7	31.2
	2014	2,756	99.6	95.0	87.1	77.0	62.7	47.7	32.2
Legal Studies	2015	10,297	98.5	92.0	78.8	63.2	47.2	31.8	19.8
	2014	10,052	98.2	90.1	78.5	63.1	46.6	31.6	19.3
Mathematics General 2	2015	31,511	99.9	96.9	87.8	75.5	61.5	46.4	30.5
	2014	31,321	99.9	97.5	88.4	75.4	60.9	45.6	30.3
Mathematics	2015	16,450	95.0	80.4	59.4	39.2	23.6	14.1	8.0
	2014	16,693	95.3	78.4	59.0	40.4	25.3	14.5	7.7
Mathematics Extension 1	2015	8,954	80.1	48.3	24.0	10.2	4.2	1.4	0.5
	2014	9,022	81.6	47.3	21.9	9.3	3.9	1.6	0.6
Mathematics Extension 2	2015	3,333	61.6	19.8	6.8	2.4	0.8	0.2	0.0
	2014	3,371	63.9	18.2	5.6	1.8	0.6	0.3	0.1
Modern History	2015	11,053	98.6	90.4	75.2	57.4	40.8	28.2	17.8
	2014	10,306	98.8	90.3	74.4	56.1	39.5	26.7	17.6
History Extension	2015	1,878	97.8	79.3	52.2	23.7	7.8	2.9	0.7
	2014	1,934	97.9	80.9	52.0	24.6	9.7	2.9	1.2
Music 1	2015	4,710	99.6	96.3	89.1	78.3	63.7	47.5	31.2
	2014	5,002	99.5	95.6	87. <b>9</b>	76.6	63.2	47.4	31.9
Music 2	2015	694	92.9	73.8	50.0	29.0	15.1	6.3	1.3
	2014	765	91.2	77.3	53.1	32.0	14.0	4.6	1.0
Music Extension	2015	424	80.0	63.4	45.0	24.8	12.0	3.8	0.2
	2014	475	80.0	68.0	51.4	29.3	14.3	4.0	0.8
PDHPE	2015	15,082	99.3	94.6	85.0	72.4	57.8	41.9	25.5
	2014	14,396	99.6	95.1	85.0	71.8	56.2	40.8	25.3
Physics	2015	9,510	96.2	82.7	62.8	43.8	28.9	16.9	7.7
	2014	9,598	97.5	82.2	62.2	43.2	28.1	16.2	7.7
Senior Science	2015	6,320	100.0	98.6	92.9	83.3	71.8	56.8	41.1
	2014	6,328	100.0	98.8	93.6	84.1	70.8	55.3	38.9
Society and Culture	2015	4,566	98.6	92.5	83.4	70.7	54.6	38.8	22.8
	2014	4,398	99.1	94.2	84.1	71.5	56.0	39.4	23.4
Software Design and Development	2015	1,783	99.4	93.6	82.6	69.4	54.2	38.3	24.8
	2014	1,719	98.4	92.1	82.3	69.2	54.3	39.8	24.7
Studies of Religion I	2015	8,951	99.4	92.7	77.6	57.4	36.8	19.7	8.4
	2014	9,299	99.1	93.1	78.5	58.2	36.5	20.2	9.2
Studies of Religion II	2015	5,902	98.5	90.9	76.8	59.1	42.2	26.8	15.3
	2014	5,464	98.7	90.9	75.9	57.1	38.2	23.7	12.5
Textiles and Design	2015	1,635	98.0	92.7	82.9	72.4	59.0	42.5	26.4
	2014	1,874	99.2	93.2	85.8	73.9	59.4	43.1	27.7
Visual Arts	2015	9,003	98.8	94.1	84.6	72.8	59.7	45.0	30.6
	2014	9,071	99.0	93.7	85.2	73.6	60.2	44.7	29.2

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

Causa	Veen	Numera		Percentage of students with scaled mark less than							
Course	Year	Number	45	40	35	30	25	20	15		
Arabic Continuers	2015	182	100.0	96.7	89.6	81.9	72.5	58.8	41.2		
	2014	211	99.5	97.2	91.0	80.1	72.0	60.2	44.1		
Arabic Extension	2015	53		100.0	96.2	75.5	58.5	35.8	9.4		
	2014	63	100.0	98.4	96.8	82.5	49.2	15.9	0.0		
Chinese Continuers	2015	102	91.2	68.6	46.1	35.3	25.5	9.8	4.9		
	2014	83	94.0	78.3	60.2	34.9	19.3	7.2	3.6		
Chinese Background Speakers	2015	660	97.9	93.6	84.2	73.6	58.5	41.7	22.9		
	2014	635	97.5	92.0	85.5	72.9	56.1	44.1	30.1		
Heritage Chinese (Mandarin)	2015	127	92.9	80.3	62.2	37.8	18.9	11.0	2.4		
	2014	121	96.7	86.8	64.5	43.0	24.0	13.2	6.6		
French Beginners	2015	647	98.3	90.3	80.2	68.0	54.6	37.7	25.0		
	2014	677	97.9	89.1	79.5	66.8	50.5	33.5	21.7		
French Continuers	2015	727	88.7	67.3	43.3	25.9	14.4	6.1	1.7		
	2014	799	92.7	68.6	44.4	<b>26</b> .5	13.1	5.3	1.6		
French Extension	2015	166	76.5	35.5	13.3	4.2	0.0				
	2014	200	84.5	40.5	9.0	1.0	0.5	0.0			
German Beginners	2015	111	94.6	83.8	71.2	54.1	32.4	20.7	9.0		
	2014	69	94.2	84.1	56.5	44.9	29.0	13.0	5.8		
German Continuers	2015	238	89.9	71.8	47.5	30.3	16.4	8.8	4.6		
	2014	277	93.9	74.0	52. <b>3</b>	33.9	19.9	11.2	4.0		
German Extension	2015	68	83.8	60.3	26.5	7.4	1.5	1.5	1.5		
	2014	61	88.5	55.7	27.9	4.9	1.6	0.0			
Indonesian Continuers	2015	63	90.5	79.4	63.5	46.0	30.2	14.3	6.3		
	2014	64	96.9	81.3	59.4	48.4	32.8	10.9	1.6		
Indonesian Background Speakers	2015	72	97.2	86.1	58.3	31.9	18.1	4.2	0.0		
	2014	68	95.6	85.3	69.1	45.6	14.7	4.4	2.9		
Italian Beginners	2015	361	94.5	84.8	71.5	57.1	46.3	34.9	19.7		
	2014	351	96.0	88.3	76.4	60.7	47.0	34.2	20.8		
Italian Continuers	2015	272	95.2	82.0	62.9	44.9	26.5	11.0	3.3		
	2014	298	95.6	80.2	61.1	38.9	21.1	12.4	5.7		
Italian Extension	2015	57	89.5	63.2	35.1	15.8	12.3	3.5	0.0		
	2014	67	88.1	64.2	20.9	4.5	0.0				
Japanese Beginners	2015	642	98.9	93.6	81.0	67.9	52.3	38.3	24.3		
	2014	687	99.0	94.2	85.0	67.8	55.0	41.0	25.9		
Japanese Continuers	2015	659	95.4	79.4	61.0	42.2	25.8	13.5	4.7		
	2014	624	96.0	76.8	54.2	34.8	21.3	10.4	3.7		
Japanese Extension	2015	208	91.3	67.8	37.0	12.5	1.9	0.0			
	2014	191	92.7	66.0	23.0	3.7	0.5	0.0			
Korean Background Speakers	2015	54	94.4	90.7	79.6	70.4	50.0	38.9	24.1		
	2014	63	95.2	92.1	82.5	68.3	57.1	44.4	25.4		
Latin Continuers	2015	194	64.4	41.2	20.6	10.3	5.7	3.6	2.1		
	2014	161	77.0	37.9	16.1	8.1	5.0	2.5	0.0		

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

Causaa	Veen	Numera	Percentage of students with scaled mark le						less than:		
Course	rear	Number	45	40 35 30 25 20 22.5 10.9 5.4 2.3 0.6	20	15					
Latin Extension	2015	129	58.1	22.5	10.9	5.4	2.3	0.8	0.0		
	2014	105	63.8	24.8	5.7	1.0	1.0	0.0			
Modern Greek Beginners	2015	69	98.6	87.0	76.8	60.9	37.7	20.3	17.4		
	2014	47	91.5	76.6	61.7	55.3	46.8	38.3	34.0		
Modern Greek Continuers	2015	95	95.8	86.3	77.9	68.4	54.7	37.9	18.9		
	2014	102	94.1	81.4	71.6	61.8	45.1	29.4	10.8		
Modern Greek Extension	2015	43	95.3	76.7	65.1	39.5	27.9	7.0	0.0		
	2014	47	89.4	74.5	57.4	44.7	29.8	14.9	8.5		
Spanish Beginners	2015	177	94.4	87.0	77.4	61.0	49.7	31.1	18.6		
	2014	202	95.5	90.1	80.2	68.3	54.0	41.1	24.3		
Spanish Continuers	2015	150	96.0	88.7	79.3	66.0	49.3	36.0	24.7		
	2014	169	97.6	92.3	81.7	66.9	54.4	36.7	23.7		
Spanish Extension	2015	46	95.7	84.8	63.0	37.0	13.0	6.5	2.2		
	2014	49	95.9	85.7	65.3	42.9	16.3	4.1	0.0		
Vietnamese	2015	145	99.3	93.8	86.2	79.3	68.3	51.0	33.1		
	2014	140	97.1	92.9	85.0	74.3	60.0	43.6	30.0		
Automotive Exam	2015	463		100.0	99.6	94.4	86.6	78.6	67.6		
	2014	415			100.0	95. <b>9</b>	89.6	79.0	63.9		
Business Services Exam	2015	1,140	1.00.0	98.9	92.1	85.4	74.0	60.5	43.8		
	2014	1,141	100.0	99.4	96.1	87.6	75.6	64.3	46.7		
Construction Exam	2015	1,637		100.0	98.0	91.6	81.2	68.8	54.7		
	2014	1,631		100.0	98.7	93.3	82.2	69.7	54.6		
Electrotechnology Exam	2015	283		100.0	99.3	95.1	80.6	59.7	43.5		
	2014	305		100.0	97.4	87.2	80.3	61.6	45.2		
Entertainment Industry Exam	2015	918	100.0	98.7	92.7	79.7	64.1	46.1	29.2		
	2014	911	100.0	98.0	91.7	81.4	66.4	47.2	26.6		
Financial Services Exam	2015	152	95.4	86.8	78.9	65.8	50.7	28.3	12.5		
	2014	229	96.5	88.6	76.0	60.3	43.7	26.2	13.5		
Hospitality Exam	2015	5,180	100.0	98.3	93.5	84.4	70.3	57.1	39.1		
	2014	5,559	100.0	99.2	93.6	84.7	70.4	53.8	34.7		
Human Services Exam	2015	585		100.0	95.2	88.2	78.5	61.5	42.7		
	2014	576	100.0	98.4	93.2	83.7	70.8	54.2	38.0		
Information and Digital Technology Exam	2015	903	100.0	98.1	93.1	87.3	74.3	59.7	41.5		
	2014	1,015	100.0	99.6	96.2	87.1	73.8	58.4	39.4		
Metal and Engineering Exam	2015	565		100.0	99.6	92.9	83.2	71.2	58.2		
	2014	756		100.0	98.8	92.1	82.4	71.0	57.9		
Primary Industries Exam	2015	603		100.0	95.9	90.1	79.8	67.7	49.1		
	2014	614		100.0	97.4	91.4	83.1	67.3	50.0		
Retail Services Exam	2015	1,072	100.0	99.3	94.9	87.6	78.7	67.3	51.1		
	2014	1,024	100.0	99.8	96.2	89.1	78.5	66.5	52.1		
Tourism Travel and Events Exam	2015	338	100.0	99.4	94.7	87.6	71.0	55.0	36.7		
	2014	331	100.0	98.8	93.4	86.7	70.1	52.9	33.8		

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

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

	Number	ATAR students	with > 10 units	Percentage who	Maximum ATAR	
Course	receiving ATAR	Number	Percentage	counted course	including the course	
Aboriginal Studies	216	70	32	81	98.20	
Agriculture	1,048	495	47	76	99.75	
Ancient History	9,765	4,094	42	85	99.95	
Biology	16,638	7,860	47	82	99.95	
Business Studies	15,226	6,002	39	86	99.95	
Chemistry	10,841	6,764	62	76	99.95	
Community and Family Studies	6,344	2,109	33	87	97.95	
Dance	775	241	31	57	98.65	
Design and Technology	2,687	1,024	38	75	99.05	
Drama	4,073	1,519	37	74	99.85	
Earth and Environmental Science	1,334	530	40	81	99.85	
Economics	5,0 <b>80</b>	2,984	59	76	99.95	
Engineering Studies	1,985	1,016	51	73	99.85	
English Standard	27,695	8,597	31	100	99.35	
English Advanced	25,836	13,592	53	99	99.95	
English Extension 1	4,503	3,192	71	88	99.95	
English Extension 2	1,627	1,048	64	83	99.95	
ESL	2,205	758	34	100	99.95	
Food Technology	2,658	918	35	86	99.15	
Geography	3,885	1,764	45	85	99.85	
Industrial Technology	3,820	1,297	34	72	96.30	
Information Processes and Technology	2,513	1,087	43	72	99.95	
Legal Studies	9,625	4,191	44	85	99.95	
Mathematics General 2	28,008	9,479	34	71	99.85	
Mathematics	15,423	9,306	60	72	99.95	
Mathematics Extension 1	8,797	6,493	74	87	99.95	
Mathematics Extension 2	3,302	1,825	55	95	99.95	
Modern History	10,327	4,698	45	84	99.95	
History Extension	1,877	1,491	79	81	99.95	
Music 1	3,907	1,428	37	61	99.30	
Music 2	693	510	74	74	99.95	
Music Extension	433	365	84	72	99.95	

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

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

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

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

#### Table A7 ATAR distribution

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

(ii) The median ATAR in 2015 was 68.70.

ATAR	Number	Number on or above	Percentage on or above
99.95	46	46	0.1
99.90	46	92	0.2
99.85	46	138	0.2
99.80	47	185	0.3
99.75	46	231	0.4
99.70	47	278	0.5
99.65	46	324	0.6
99.60	48	372	0.7
99.55	46	418	0.7
99.50	47	465	0.8
99.45	42	507	0.9
99.40	51	558	1.0
99.35	47	605	1.1
99.30	42	647	1.2
99.25	50	697	1.3
99.20	45	742	1.3
99.15	45	787	1.4
99.10	45	832	1.5
99.05	51	883	1.6
99.00	44	927	1.7
99.00–99.95	927	927	1.7
98.00–98.95	923	1,850	3.3
97.00–97.95	930	2,780	5.0
<b>96.00–96</b> .95	923	3,703	6.6
95.00-95.95	915	4,618	8.3
94.00-94.95	921	5,539	9.9
93.00-93.95	00.4		
92.00-92.95	924	6,463	11.6
91.00-91.95	924 916	6,463 7,379	11.6 13.2
	924 916 909	6,463 7,379 8,288	11.6 13.2 14.9
90.00-90.95	924 916 909 920	6,463 7,379 8,288 9,208	11.6 13.2 14.9 16.5
90.00–90.95 89.00–89.95	924 916 909 920 905	6,463 7,379 8,288 9,208 10,113	11.6 13.2 14.9 16.5 18.1
90.00–90.95 89.00–89.95 88.00–88.95	924 916 909 920 905 908	6,463         7,379         8,288         9,208         10,113         11,021	11.6 13.2 14.9 16.5 18.1 19.8
90.00-90.95 89.00-89.95 88.00-88.95 87.00-87.95	924 916 909 920 905 908 911	6,463         7,379         8,288         9,208         10,113         11,021         11,932	11.6 13.2 14.9 16.5 18.1 19.8 21.4
90.00–90.95 89.00–89.95 88.00–88.95 87.00–87.95 86.00–86.95	924 916 909 920 905 908 911 898	6,463         7,379         8,288         9,208         10,113         11,021         11,932         12,830	11.6 13.2 14.9 16.5 18.1 19.8 21.4 23.0
90.00-90.95 89.00-89.95 88.00-88.95 87.00-87.95 86.00-86.95 85.00-85.95	924 916 909 920 905 908 911 898 904	6,463           7,379           8,288           9,208           10,113           11,021           11,932           12,830           13,734	11.6 13.2 14.9 16.5 18.1 19.8 21.4 23.0 24.6
90.00-90.95 89.00-89.95 88.00-88.95 87.00-87.95 86.00-86.95 85.00-85.95 84.00-84.95	924 916 909 920 905 908 911 898 904 899	6,463         7,379         8,288         9,208         10,113         11,021         11,932         12,830         13,734         14,633	11.6 13.2 14.9 16.5 18.1 19.8 21.4 23.0 24.6 26.3
90.00-90.95         89.00-89.95         88.00-88.95         87.00-87.95         86.00-86.95         85.00-85.95         84.00-84.95         83.00-83.95	924 916 909 920 905 908 911 898 904 899 887	6,463         7,379         8,288         9,208         10,113         11,021         11,932         12,830         13,734         14,633         15,520	11.6 13.2 14.9 16.5 18.1 19.8 21.4 23.0 24.6 26.3 27.8
90.00-90.95         89.00-89.95         88.00-88.95         87.00-87.95         86.00-86.95         85.00-85.95         84.00-84.95         83.00-83.95         82.00-82.95	924 916 909 920 905 908 911 898 904 899 887 894	6,463         7,379         8,288         9,208         10,113         11,021         11,932         12,830         13,734         14,633         15,520         16,414	11.6 13.2 14.9 16.5 18.1 19.8 21.4 23.0 24.6 26.3 27.8 29.4
90.00-90.95         89.00-89.95         88.00-88.95         87.00-87.95         86.00-86.95         85.00-85.95         84.00-84.95         83.00-83.95         82.00-82.95         81.00-81.95	924 916 909 920 905 908 911 898 904 899 887 894 898	6,463         7,379         8,288         9,208         10,113         11,021         11,932         12,830         13,734         14,633         15,520         16,414         17,312	11.6 13.2 14.9 16.5 18.1 19.8 21.4 23.0 24.6 26.3 27.8 29.4 31.1
90.00-90.95         89.00-89.95         88.00-88.95         87.00-87.95         86.00-86.95         85.00-85.95         84.00-84.95         83.00-83.95         82.00-82.95         81.00-81.95         80.00-80.95	924 916 909 920 905 908 911 898 904 899 887 894 894 898 898 889	6,463         7,379         8,288         9,208         10,113         11,021         11,932         12,830         13,734         14,633         15,520         16,414         17,312         18,201	11.6 13.2 14.9 16.5 18.1 19.8 21.4 23.0 24.6 26.3 27.8 29.4 31.1 32.7
90.00-90.95         89.00-89.95         88.00-88.95         87.00-87.95         86.00-86.95         85.00-85.95         84.00-84.95         83.00-83.95         82.00-82.95         81.00-81.95         80.00-80.95         79.00-79.95	924 916 909 920 905 908 911 898 904 899 887 894 898 898 889 889 889 882	6,463         7,379         8,288         9,208         10,113         11,021         11,932         12,830         13,734         14,633         15,520         16,414         17,312         18,201         19,083	11.6 13.2 14.9 16.5 18.1 19.8 21.4 23.0 24.6 26.3 27.8 29.4 31.1 32.7 34.2
90.00-90.95         89.00-89.95         88.00-88.95         87.00-87.95         86.00-86.95         85.00-85.95         84.00-84.95         83.00-82.95         81.00-81.95         80.00-80.95         79.00-79.95         78.00-78.95	924 916 909 920 905 908 911 898 904 899 887 894 894 898 894 898 889 889 882 882 876	6,463         7,379         8,288         9,208         10,113         11,021         11,932         12,830         13,734         14,633         15,520         16,414         17,312         18,201         19,083         19,959	11.6 13.2 14.9 16.5 18.1 19.8 21.4 23.0 24.6 26.3 27.8 29.4 31.1 32.7 34.2 35.8

#### Table A7 ATAR distribution (continued)

ATAR	Number	Number on or above	Percentage on or above
76.00–76.95	874	21,699	38.9
75.00–75.95	871	22,570	40.5
74.00–74.95	845	23,415	42.0
73.00–73.95	858	24,273	43.5
72.00–72.95	844	25,117	45.1
71.00–71.95	842	25,959	46.6
70.00–70.95	847	26,806	48.1
69.00-69.95	820	27,626	49.6
68.00-68.95	830	28,456	51.1
67.00–67.95	821	29,277	52.5
66.00–66.95	792	30,069	53.9
65.00-65.95	808	30,877	55.4
64.00-64.95	791	31,668	56.8
63.00–63.95	795	32,463	58.2
62.00-62.95	772	33,235	59.6
61.00–61.95	759	33,994	61.0
60.00-60.95	760	34,754	62.4
59.00-59.95	743	35,497	63.7
58.00-58.95	724	36,221	65.0
57.00-57.95	726	<b>36</b> ,947	66. <b>3</b>
56.00-56.95	720	37,667	67.6
55.00–55. <b>95</b>	701	38,368	68.8
<b>54.00–5</b> 4.95	686	39,054	70.1
53.00-53.95	672	39,726	71.3
52.00-52.95	658	40,384	72.5
51.00-51.95	658	41,042	73.6
50.00-50.95	636	41,678	74.8
49.00-49.95	609	42,287	75.9
48.00-48.95	618	42,905	77.0
47.00-47.95	591	43,496	78.0
46.00-46.95	582	44,078	79.1
45.00-45.95	555	44,633	80.1
44.00-44.95	550	45,183	81.1
43.00-43.95	527	45,710	82.0
42.00-42.95	531	46,241	83.0
41.00-41.95	494	46,735	83.9
40.00-40.95	487	47,222	84.7
39.00–39.95	463	47,685	85.6
38.00–38.95	458	48,143	86.4
37.00–37.95	441	48,584	87.2
36.00–36.95	428	49,012	87.9
35.00–35.95	410	49,422	88.7
34.00–34.95	383	49,805	89.4
33.00–33.95	378	50,183	90.0
32.00-32.95	367	50,550	90.7
31.00–31.95	347	50,897	91.3
30.00-30.95	342	51,239	91.9

### Table A8 ATAR percentiles: 2011–2015

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

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

### Table A9 Relationship between the ATAR and aggregates: 2011–2015

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

4740					
ATAK	2011	2012	2013	2014	2015
99.95	476.5	475.2	477.9	475.3	478.1
99.50	<b>4</b> 56.2	454.2	455.0	454.0	457.9
99.00	<b>445</b> .6	443.9	443.8	444.5	446.9
98.00	<b>432</b> .2	429.7	429.5	431.2	432.4
95.00	<b>40</b> 3.7	401.6	402.6	404.4	404.2
90.0 <b>0</b>	371.2	369.4	371.3	372.2	371.2
<b>8</b> 5.00	343.7	343.0	344.8	345.1	343.8
80.00	318.9	318.4	321.3	320.6	319.9
75.00	295.7	295.3	297.9	296.9	297.0
70.00	274.1	272.8	276.1	275.0	274.8
65.00	252.9	251.1	253.5	253.3	253.1
60.00	233.1	229.9	232.2	231.9	231.4
55.00	213.0	209.5	211.3	210.8	211.4
50.00	193.5	190.5	191.3	189.9	191.9

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

© 2016 Universities Admissions Centre (NSW & ACT) Pty Ltd ACN 070 055 935 ABN 19 070 055 935

ISSN 1449-8723 Printed May 2016

UAC and the Technical Committee on Scaling are the owners of the Copyright in this publication.

Apart from any fair dealing for the purpose of private study, criticism or review, or otherwise as permitted under the Copyright Act 1968, no part may be reproduced by any process without UAC's written permission. Enquiries should be addressed to the Managing Director, UAC.

UAC and the Technical Committee on Scaling endeavour to consider copyright requests on their individual merits. As UAC and the Technical Committee on Scaling does not endorse the use of ATAR calculators or other predictive applications, requests for the use of data for this purpose will generally not be granted.

UAC has no objection to schools and tertiary institutions reproducing the publication provided it is for use only within their own institution and this copyright statement is included. If the document is not reproduced in full, individual sections should not be reproduced out of context where information could be incomplete and/or misleading. Schools and tertiary institutions must ensure that this information is not transmitted to any other person or body without prior permission from UAC.

ATAR is a registered trademark of the Victorian Tertiary Admissions Centre on behalf of all Australian tertiary admissions centres.

#### About this publication

This report contains information on the calculation of the Australian Tertiary Admission Rank (ATAR) in 2015. It includes an overview of the HSC and the ATAR, a breakdown of the scaling process, analysis of HSC and ATAR statistics and notes trends for the year.

#### Cover picture

Zoe Heytman

Northern Beaches Secondary College Freshwater Senior Campus

#### Earth and Elements (Painting)

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

#### ARTEXPRESS

ARTEXPRESS is an annual exhibition of outstanding works selected from the NSW Higher School Certificate examination in Visual Arts. ARTEXPRESS is a joint project of the NSW Department of Education and Communities and the NSW Board of Studies, Teaching and Educational Standards in association with the Art Gallery of NSW. The artworks are on display at the Art Gallery of New South Wales, Hazelhurst Regional Gallery and Arts Centre, The Armory, Sydney Olympic Park, McGlade Art Gallery, Australian Catholic University and the Margaret Whitlam Gallery, University of Western Sydney from February to September, as well as touring regional galleries throughout NSW.

#### Important Information

#### **UAC** disclaimer

While UAC and the authors of this publication have used their best endeavours to ensure that information and analyses of information contained in this publication are correct, any use or reliance whatsoever on the publication by any person is that person's responsibility and UAC and the authors of this publication disclaim any responsibility or liability in relation to that use or reliance.

#### Advertising disclaimer

UAC does not necessarily endorse any product or service that may be advertised in this publication.

#### Fees and charges

All UAC fees and charges include 10 per cent GST. UAC charges and fees are not refundable under any circumstances, except as required by law.

#### Times

Times indicated in this publication are based on Sydney local time.

#### UAC Privacy Policy

The Universities Admissions Centre (NSW & ACT) Pty Ltd (UAC) recognises the importance of protecting personal information and is bound by the NSW State Information Protection Principles<sup>1</sup>, the National Privacy Principles<sup>2</sup> and the NSW Health Privacy Principles<sup>3</sup>.

Details of UAC's Privacy Policy are available at www.uac.edu.au/general/ privacy.shtml.

UAC collects personal information and, in some circumstances, information regarding your health, or information about someone other than yourself, for the purpose of processing your application for admission to tertiary institutions. UAC will only collect information for lawful purposes related to its function. You may seek access to personal information about you collected by UAC.

The type of personal information UAC holds includes your contact details (name, address, telephone number, email address), date of birth, gender, citizenship, educational achievements, professional qualifications, employment experience, examination results, information related to your health or the health of a family member and your Australian Tertiary Admission Rank (ATAR).

If you are providing personal information about someone other than yourself, you should tell them about UAC's Privacy Policy, which can be found on UAC's website at www.uac.edu.au/general/privacy.shtml.

If you are a NSW Higher School Certificate student, your Year 12 results will be held, along with Year 12 results from other states and territories in Australia, in an archive database at UAC. If you are eligible for an Australian Tertiary Admission Rank (ATAR) or a Limited ATAR, these will also be held in the database. Your results, including your ATAR if you are eligible, will be held in similar archives at tertiary admissions centres in other states in Australia. Results held in these archives will only be accessed by the relevant tertiary admission centre if you initiate an application for tertiary study through that centre, or if you submit an application for tertiary study directly with an institution participating in that centre.

Any questions regarding privacy at UAC should be forwarded in writing to: The Managing Director, UAC, Locked Bag 112, Silverwater NSW 2128.

1 In the Privacy and Personal Information Protection Act 1998 (NSW).

- 2 In the Privacy Act 1988 (Cth).
- 3 In the Health Records and Information Privacy Act 2002 (NSW).

### 2016 edition

Universities Admissions Centre (NSW & ACT) Pty Ltd Quad 2, 8 Parkview Drive Sydney Olympic Park NSW Locked Bag 112, Silverwater NSW 2128 1300 ASK UAC (1300 275 822) from mobiles: (02) 9752 0200 from overseas: +61 2 9752 0200 www.uac.edu.au ABN 19 070 055 935 ACN 070 055 935

