How is the ATAR calculated?
By Paul Livingstone

The following process is used to calculate each student’s ATAR.

All Study Scores are scaled to adjust for the fact that it is more difficult to obtain a high Study Score in some studies than others. Once they have been scaled, they are referred to as VTAC Scaled Study Scores.

An Aggregate is calculated by adding:

- a student’s best VTAC Scaled Study Score in any one of the English studies, plus
- the VTAC Scaled Study Scores of their next best three permissible studies, plus
- 10 per cent of the VTAC Scaled Study Score for a fifth study (where available), plus
- 10 per cent of the VTAC Scaled Study Score for a sixth study (where available).

The Scores contributing to the Aggregate are subject to the study restrictions described above.

The Aggregate is a number between 0 and a value over 210.

All eligible students are then ranked in order of their Aggregate, and a percentage rank is assigned to distribute students as evenly as possible over a 100 point scale. All students with the same Aggregate receive the same percentage rank. If a number of students are tied on a particular Aggregate the number that receives the corresponding percentage rank may increase.

Finally, the percentage rank is converted to an ATAR, which is the estimate of the percentage of the population in the relevant age group that the student outperformed, taking into account the students who have successfully completed VCE as well as those who moved or left school before Year 12.

The ATAR is a number from 0 and 99.95 in intervals of 0.05. The highest rank is 99.95, the next highest 99.90, and so on. The lowest automatically reported rank is 30.00, with ranks below 30.00 being reported as ‘less than 30’.

A complete list of studies and VTAC Scaled Study Scores used in the calculation of a student’s ATAR are included on their ATAR statement.

Why are VCE results scaled?

Each of a student’s Study Scores provided by the VCAA is calculated from the total marks the student receives for each graded assessment in that study. The Study Scores for all studies are reported on a scale of 0 to 50 with an average score of 30.

The Study Score is not a score out of 50. It is a ranking or relative position which shows a student’s performance compared with all other students who took that study in that year. A student with a Study Score of 30 is in the middle of the cohort, or has performed better than about half of all students who took that study in that year. A student with a Study Score of 40 has performed better than about 91% of all students who took that study in that year.
What this means is that the middle student in any study will have a Study Score of 30, regardless of how strong the other students were in the study and how difficult it was to achieve the middle ranking.

VTAC’s role is to provide a way of ranking students that is fair to students, regardless of the studies they have taken.

Where the student competition in a study is higher, Study Scores have to be adjusted upwards; otherwise students doing that study would be unfairly disadvantaged.

Similarly, in a study where the student competition is lower, the Study Scores have to be adjusted downwards; otherwise students doing that study would be unfairly advantaged.

Scaling ensures that it is possible for students to attain a high ATAR regardless of the combination of studies they undertake.

This is not always well understood and many students believe that to achieve their best possible ATAR they need to choose studies that are scaled up. This is not true and may even work against them.

If a student chooses a study that they are not very good at simply because it will be scaled up, the Study Score they receive will be a lot lower than what they would expect in a study they are good at and that interests them. Yes, the score will be scaled up, but from a lower Study Score. It is unlikely that the VTAC Scaled Study Score would be any higher than if they had chosen a more suitable study, even one that is scaled down.

The way to ensure that a student achieves the best ATAR is to choose studies according to what interests them; what they are good at; and what studies they need for future study.

The calculation of the ATAR is a complicated process, but it is the fairest system developed by experts which allows students to undertake the studies they want and enables tertiary institutions to compare students who have completed different combinations of VCE studies.

The use of the ATAR guarantees that all studies are treated equally and provides students with a common score for tertiary selection across Australia.
How does scaling work?

by Paul Livingstone

VTAC adjusts the Study Scores for each study to take account of how strong the students were in the study and how difficult it was to achieve the middle ranking. The strength of competition in each study is measured by how well the students performed in all their other studies.

In each study, the Study Scores are adjusted so that the overall level of scores in that study matches the scores obtained by the same group of students in all of their other studies.

For example, in Chemistry in 2012 the average Study Score was 30, but the students who took Chemistry averaged 34 for all their studies (including Chemistry). This shows that the students who did Chemistry in 2012 were of above average strength in their other studies. Therefore, the scaling process adjusted the Study Scores upwards so that the average VTAC Scaled Study Score for Chemistry was set at 34.

The 2012 Geography students averaged 29 in all their studies (including Geography). So, the scaling process adjusted the Study Scores downwards so that the average VTAC Scaled Study Score for Geography was 29.

In some studies the scaling process produces VTAC Scaled Study Scores that are greater than 50. They can go as high as 55. However, the minimum VTAC Scaled Study Score cannot go below zero.

VCE studies are always scaled in the year in which they were undertaken. This may not necessarily be in the year in which a student receives their ATAR.

This scaling process is carried out each year for each VCE study and VCE VET program for which there is a Study Score. There are no predetermined outcomes—the adjustments are based on the performance of students each year. Nevertheless, the process is very stable and there is little difference in the scaled VTAC Scaled Study Scores from year to year.

Mathematics and Languages

Mathematics

VCE mathematics studies are designed to cater for students of differing abilities and interests. Specialist Mathematics is the most difficult, followed by Mathematical Methods (CAS) and then by Further Mathematics.

To ensure that students undertaking the more difficult mathematics studies are not disadvantaged, all three mathematics studies are scaled against each other as well as being scaled against all other studies. The higher of the two resulting scales is used.

Languages

As a result of government policy to encourage the study of languages each Language is adjusted up by adding five to the initial VTAC Scaled Study Score average. All students of a Language receive an adjustment, but it is not a uniform adjustment.

For example a student achieving a perfect Study Score of 50 is guaranteed a VTAC Scaled Study Score of at least 50. The maximum VTAC Scaled Study Score only goes above 50 when
the average score is very high (the scaled mean plus twice the scaled standard deviation exceeds 50). Published means for each Language include this adjustment.

**Other variables**

**Previous VCE studies**

VVCE studies are always scaled in the year in which they were undertaken (this may not necessarily be in the year in which a student receives their ATAR).

**Further VCE study**

Students who have previously obtained an ATAR, but have undertaken further study resulting in an additional Study Score or Increment, are eligible to have their ATAR recalculated. The higher of the two will be recorded and reported as an ATAR. Ranking for courses will be based on the highest ATAR achieved. VTAC will, however, inform course selection authorities of all of an applicant’s VCE results—including those not contributing to their ATAR.

**Notional ATAR**

A ‘Notional ATAR’ is used to rank students who have a previous Year 12 (other than VCE) or some other qualification (e.g. the International Baccalaureate, also known as the IB).

A Notional ATAR is created for:

- all applicants who successfully completed a full Victorian Year 12 attempt prior to 1992,
- all applicants who (without having successfully completed a full Victorian Year 12 attempt prior to 1992) have for the first time, at least four Study Scores and VCE (HSC) ‘Group 1’ subjects, or their predecessors in combination including any one of the English group (i.e. at least four scorable subjects), and
- all International Baccalaureate students who qualify for the IB Diploma in the current year.

Note: Only Victorian IB students who sit the GAT will be issued with a Notional ATAR statement.

**Interstate use of the ATAR**

If a student has applied to institutions in other Australian states they will be considered on the basis of their ATAR.

**Interrupted study status**

Applicants granted official interrupted study status by the VCAA should seek advice from VTAC about the applicability of rules and provisions in this publication. In general, the rules that require completion of Units 3 and 4 in the one year do not apply to applicants granted interrupted study status in the studies concerned.