

Teesside University compliance relating to assessment and awards

Summary

The Office for Students (OfS) requires all registered higher education providers' courses to meet a minimum set of requirements, expressed in our conditions of registration that relate to quality and standards. This includes:

- a requirement in place since 1 May 2022 that academic regulations are designed to ensure that a provider's awards reflect students' knowledge and skills (that they are 'credible') (B4.2.c)
- a requirement that awards granted to students are credible at the point of being granted and when compared with those granted previously (B4.2.e).

This report assesses degree classification algorithms. These form part of a university's academic regulations or the rules and guidelines that govern the quality and integrity of its academic programmes.

Universities often use algorithms to apply rules that determine the final class of degree for a student. Historically, such rules might include:

- aggregating module marks for relevant years of study
- weighting the proportion of marks from each year or level of study that contribute to the final award
- determining the volume of credits that contribute to calculating the class of degree (discounting)
- using more than one algorithm to calculate a students' final mark and then awarding the student the higher result
- additional rules specifically about students whose performance sits close to the classification borderlines (borderline rules).

Our concern is that the rules that providers include in their algorithms have the potential to inflate the proportion of first and upper second class awards without corresponding changes in student achievement.

This regulatory case report explains our detailed assessment of Teesside University and our conclusion that the university is compliant with the OfS's condition of registration that concerns

assessment and awards (condition B4). However, we have found that Teesside University is at increased risk of breaching that condition of registration.¹

The OfS assessed changes the university made to its academic regulations, the impact these had on the classifications it awarded and the reasons for the changes. A university's academic regulations are the rules that govern its higher education courses, including the award of degrees and other qualifications. An algorithm is the part of a university's academic regulations that sets out the rules that determine the class of degree to be awarded to a student. We found that the university had made changes to its algorithms in 2014-15. While the changes did result in a small increase in the proportion of first and upper second class degrees awarded, this increase was not sufficiently statistically significant and therefore we did not find a breach of condition B4.

We noted that the university's academic regulations for 2025-26 include discounting the lowest 20 credits at both Levels 5 and 6.

The university also used multiple algorithms to determine an individual student's attainment, with the student awarded the best outcome from the different algorithms. We are concerned that, although use of more than one algorithm is consistent with wider sector practice, it is not consistent with sector guidance published in 2021, which recommends that, where possible, an individual student's attainment should be classified using only one algorithm, or with sector research published in 2019 that suggests discounting and employing multiple algorithms may cause grade inflation.²

The university's submission explained how it had assured itself that classifications reflected the knowledge and skills of students – this involved mapping module outcomes and student work, and getting assurance from external examiners. The university explained that its external examiners, as specialists in their subject fields, are responsible for confirming that the awards and classifications of student work are reflective of their achievements and equivalent to classifications in the sector. The university further explained that its external examiners received module assessment briefs and examination papers before they were used, to confirm they were appropriate to meeting the learning outcomes of the course. However, we could not see that this had been done in a way that gave full consideration to how the classes of degree awarded would appropriately reflect the knowledge and skills of students.

We recognise that the university's practice is typical across the sector. However, in our experience, and as suggested by independent research, the role of external examiners across the sector varies widely. It can be focused on sampling assessments at a module level (or equivalent) and does not extend on a routine basis to a full consideration of the relationship between the overall achievement of a student, as represented across their portfolio of work, and the class of degree awarded to them.³ The university also explained that its decision to retain discounting and two algorithms was, in part, a reflection of the continued use of these practices in the sector.

Our conclusion was that there are further actions we would expect the university to take to ensure an appropriate connection between the actual attainment of students as evidenced by assessed

¹ OfS, 'Condition B4: Assessment and awards'.

² Universities UK, 'Principles for effective degree algorithm design'; 'Understanding degree algorithms'.

³ Higher Education Funding Council for England, 'A review of external examining arrangements across the UK', page 94.

student work in aggregate, and the class of degrees awarded. Our finding is therefore that the university is at an increased risk of a future breach of condition B4.

Every institution with degree awarding powers needs to ensure changes to its academic regulations do not result in a higher classification of degree being awarded based on the same student achievement, unless those changes are required to properly reflect this. Unless awards made appropriately reflect student attainment, such changes may result in a breach of condition B4.

Following engagement with the university, it has agreed to actions, explained below, to resolve this increased risk.

Although it did not affect our final judgement or our decision on any intervention in this case, we recognise that the way the university currently secures its academic standards is likely to reflect wider practice in the sector. We are also publishing a report on bachelors' degree classification algorithms that sets out our views on how higher education providers can ensure that the classes of bachelors' degrees they award appropriately reflect students' achievement.⁴

Institutions also need to pay particular attention if they are using rules that are likely to be inherently inflationary – such as discounting credits with the lowest marks or selecting the best result from multiple algorithms as the class of degree to be awarded.

Background

We opened an investigation on 1 September 2022 on the basis of data relating to Teesside University's awards of first and upper second class bachelors' degrees.⁵ When we opened the investigation the data showed a seven percentage point increase in first and upper second class degrees awarded between 2014-15 and 2015-16 by the university.⁶ This did not substantially reduce in the period to 2017-18, and was followed by a further 5.3 percentage point increase between 2017-18 and 2018-19.

We considered that evidence of a sustained increase in first and upper second class degrees combined in that period indicated that changes might have been made to academic regulations. Other providers may have had higher levels of unexplained increases overall in the period 2014-15 to 2018-19. However, those providers did not have such a significant increase in their observed attainment in one year that was then sustained, or had much smaller student populations, or were already subject to other regulatory investigation by the OfS. We therefore decided to explore this through an investigation. As part of our investigation we requested that the university submit documents relating to changes to, or discussions of, any aspects of relevant academic regulations

⁴ OfS, ['Bachelors' degree classification algorithms'](#).

⁵ OfS, ['Analysis of degree classifications over time: Changes in graduate attainment from 2010-11 to 2020-21'](#). Data was extracted from column 'T' to 'U' (observed percentage awarded first and upper second class degrees combined) of Annex A: Data – Table 1'.

⁶ OfS, ['Analysis of degree classifications over time: Changes in graduate attainment from 2010-11 to 2020-21'](#). Data was extracted from column 'S' to 'T' (observed percentage awarded first and upper second class degrees combined) of Annex A: Data – Table 1. The OfS has subsequently revised its method for the calculation of this data, and its most recent publication has a value of 6 per cent for this increase. See OfS, ['Analysis of degree classifications over time: Changes in graduate attainment from 2010-11 to 2022-23'](#). Data was extracted from column 'U' to 'V' (observed percentage awarded first and upper second class degrees combined) of Annex A: Data – Table 1.

that were in effect in any academic year from 2014-15. We wanted this information to understand whether:

- a. The university had made changes to its academic regulations during this period.
- b. If so, whether these changes might have increased the proportion of first and upper second class degrees awarded by the university.
- c. The university could demonstrate that any increase in awards was a result of improvement in students' achievement.

We considered a range of evidence but did not place weight on data relating to 2019-20 to 2020-21, because of the potential impact of the Covid pandemic on degree classifications.

Summary of the university's submission

The university's submission showed that it had changed its academic regulations in 2014-15 and 2019-20. Before the regulations introduced in 2014-15 the university used degree classification algorithms that had been in place since 2004. The academic regulations from 2004 used two degree classification algorithms, with a 'best grade' approach. One used the average mark from all credits at Levels 5 and 6, with a respective 30-70 weighting. A second used the average mark from all credits at Level 6. Each algorithm was used to determine a class of award, and a student was awarded the higher classification if these differed.

The university also used a discretionary borderline rule, which meant that a student with a final aggregate mark within two percentage points of a classification boundary would be considered for the higher classification, providing that at least half of the Level 6 credits were in or above the higher classification. A further discretionary rule enabled students to progress and be awarded a degree without passing modules to the value of 20 credits. The 2004 regulations defined discretion as 'the process by which an Assessment Board uses its delegated authority to act according to its academic judgement in relation to a student's performance. Discretion should always be exercised to the benefit of the student, as determined by the Board.'

Changes made in 2014-15

In 2013 the university reviewed its assessment framework, resulting in a new set of regulations that came into force in 2014-15. It told the OfS that 'one of the key purposes of the review was to provide a transparent and consistent set of assessment regulations that would ensure the same assessment outcomes across provision', as the university's 2004 academic regulations used degree classification algorithms that had many discretionary aspects. The university told the OfS that other factors also led to the review: a combination of institution-specific changes and shifts in the higher education system as a whole. The latter included the reform programme announced by the coalition government in 2010 and the publication of the subsequent White Paper in 2011, and the publication of the UK Quality Code for Higher Education, as well as 'local level issues' with reported 'dissatisfaction or irritation' with specific aspects of the regulations, as well as the opportunity to 'facilitate regulatory literacy in its staff members'.

The regulations introduced in 2014-15 used three classification algorithms. The first algorithm introduced credit discounting but maintained programme-level weightings in line with the 2004 academic regulations, using the best 100 credits at Level 5 and the best 100 credits at Level 6

(with a 30-70 weighting between the respective levels). This meant that the 20 credits with the lowest marks at each of Levels 5 and 6 were not counted in the calculation. Consistently with the 2004 academic regulations, the second algorithm used 120 credits at Level 6 and no Level 5 credits. The third algorithm used the profile of credits at Level 6, which meant that a higher classification would automatically be awarded if a student achieved at least 80 Level 6 credits in a higher classification than the base calculation from the first two algorithms, and where no more than 20 Level 6 module credits were in the class lower than the base calculation; no Level 5 credits were used. The algorithm that produced the highest classification was again used to determine the class of award for each student. In addition, the university removed the discretionary borderline rules from its degree classification algorithms.

Changes designed for 2019-20, fully introduced in 2020-21

In 2018 the university reviewed the use of the third algorithm. In the university's submission it asserted that the third algorithm had:

'resulted in a slight increase in the number of "good" honours at that time, although the picture was mixed across its schools. This was monitored annually and, in 2018-19, the removal of the 80-credit classification algorithm, the third algorithm, was approved (effective from 2019-20) on the basis that the percentage of students awarded by this option had been very low since its introduction and it was less understood by staff and students'.

This review culminated in the approval of academic regulations in 2019, when the third algorithm was discontinued. The university continued to use the first two classification algorithms as set out in the 2014-15 academic regulations. This change in regulations was planned in 2019-20 but postponed until 2020-21 because of the pandemic. The university still uses these two classification algorithms in its current academic regulations for 2025-26. The university's explanations of how it assured itself that awards reflected knowledge and skills of students focused on the mapping of module outcomes and the role played by external examiners.

OfS analysis

OfS modelling

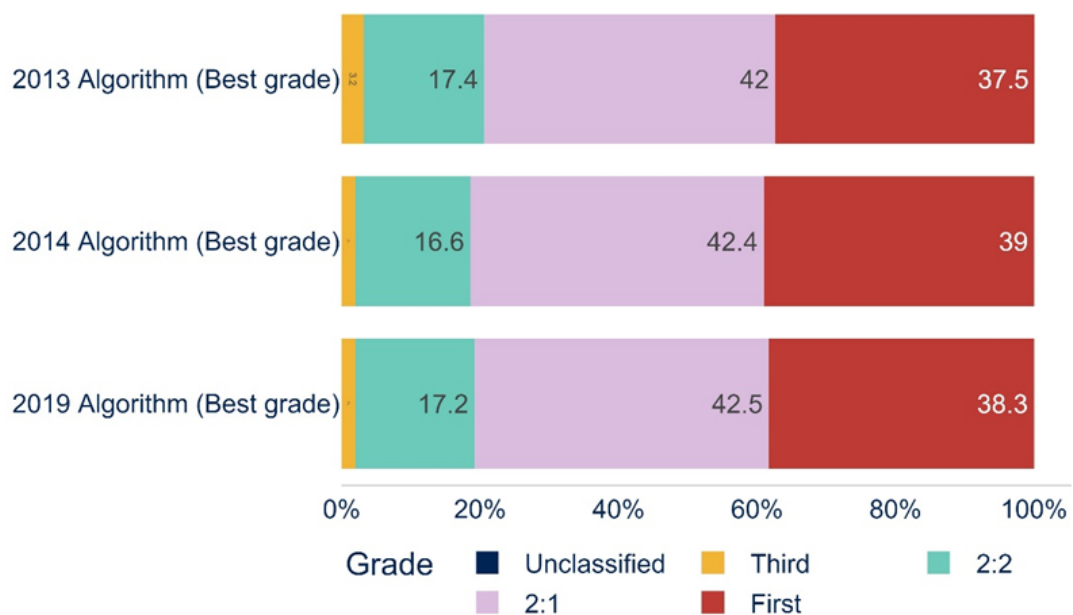
The OfS conducted a modelling exercise to understand the impact of the changes the university had made to its degree classification algorithm. We modelled the impact of the academic regulations used by the university in 2013-14, 2014-15 and 2019-20 by applying each set of regulations to the marks achieved by a subset of the university's 2021-22 student cohort (1,550 students). Our modelling had the effect of removing the impact of other variables that might have improved the classifications of awards, such as changes to teaching practices and increased student support.

Our modelling (Figure 1) showed that the changes that the university made to its algorithms between 2013-14 and 2014-15 would have produced a small increase of 1.9 per cent in the proportion of combined first and upper second class degrees when the same sets of student marks are put through each set of algorithms. The same modelling showed that the number of first-class degrees by itself that would have been awarded using the 2014-15 algorithms was 1.5 percentage points higher (37.5 per cent to 39.0 per cent) for the modelled student population than when the 2013-14 algorithms were applied to that same population. However, we found that the increases in combined first and upper second class

degrees, and first-class degrees, were not sufficiently statistically significant for us to consider further regulatory action. The university was found not to be in breach of condition B4.

Our modelling also showed that the removal of the third algorithm in 2019-20 resulted in a decrease in the proportion of first and upper second class degrees awarded in the modelled student population, from 81.4 per cent to 80.8 per cent (a decrease of 0.6 percentage points), with the proportion of first-class degrees awarded to the modelled student population decreasing from 39.0 per cent to 38.3 per cent (a decrease of 0.7 percentage points).

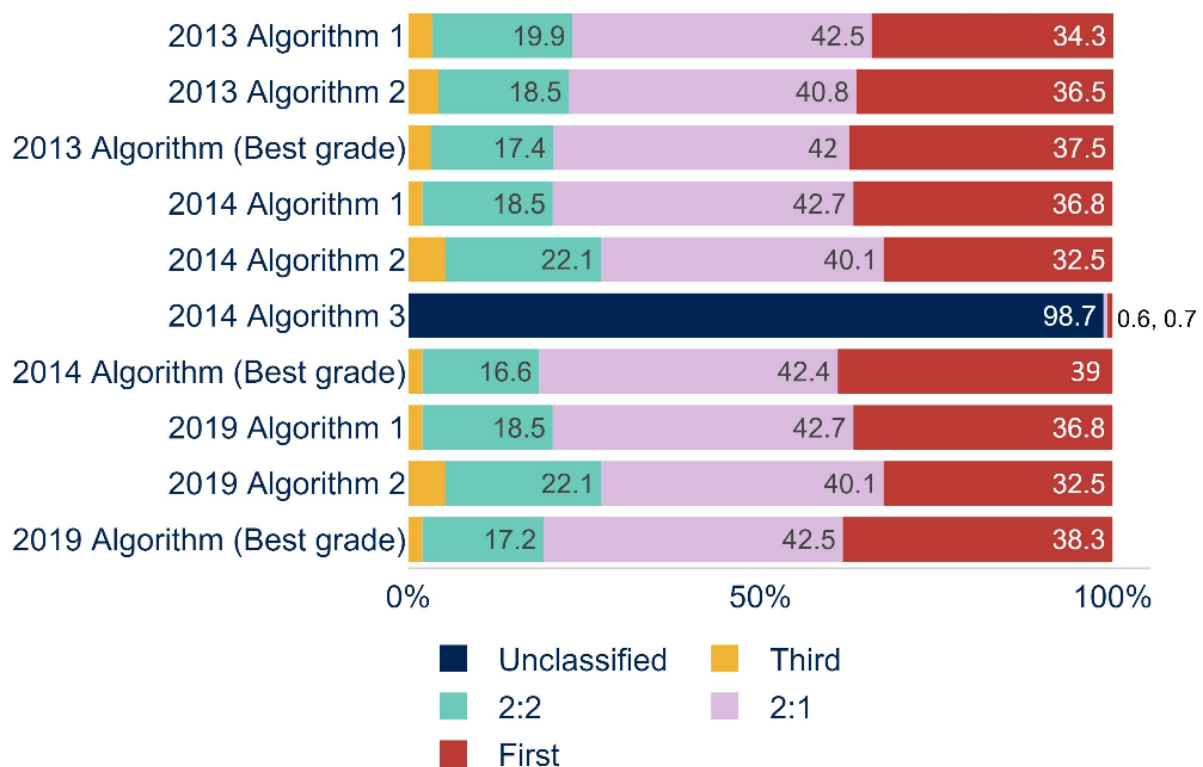
Figure 1: Percentage of grades according to each set of regulations, using best grade approach



Multiple algorithms

We modelled the impact of using multiple algorithms by comparing the number of first and upper second class degrees that would be awarded for each algorithm from the 2013-14, 2014-15 and 2019-20 regulations, using the 'best grade' approach (Figure 2).

Figure 2: Proportion of classified awards in each classification under each algorithm



The use of a 'best grade' approach will always increase the awards made compared with a single algorithm. Our modelling of the impact of this approach showed this when measured against either the first or second algorithm. The university continues to use a 'best grade' approach with algorithms 1 and 2 from the 2014-15 academic regulations in the academic regulations for 2025-26.

Discounting

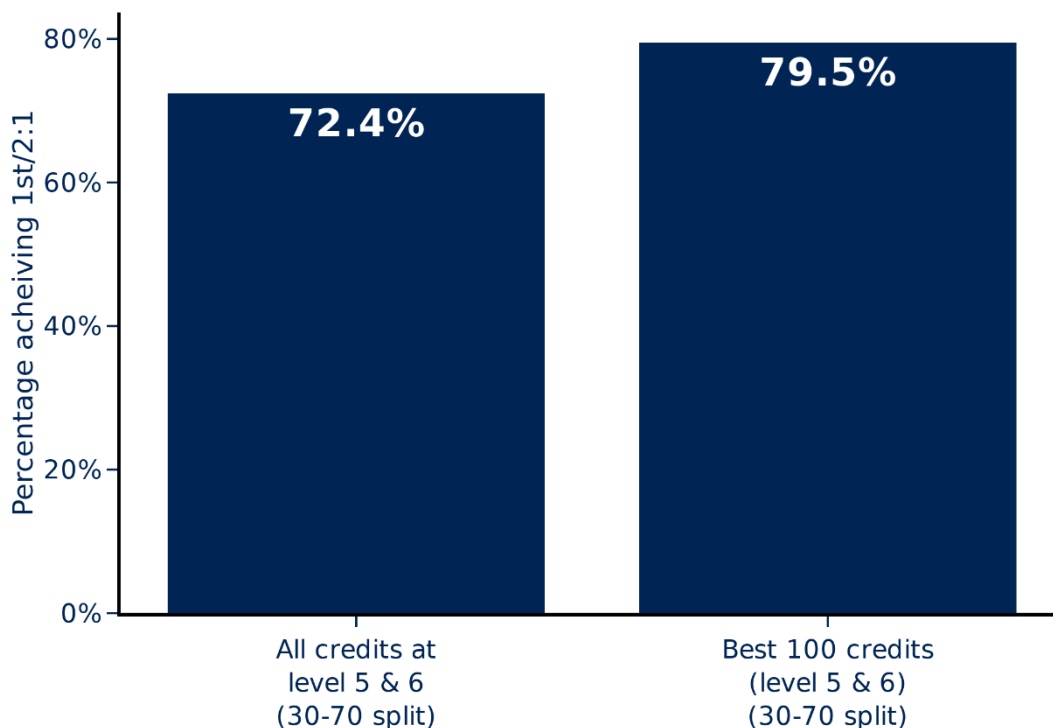
Discounting within a degree classification algorithm refers to a calculation method that uses only a specified number of credits, with a number being discounted (the marks associated with these credits being removed from the calculation) according to a rule. Typically, each level of undergraduate study will involve a student completing 120 credits; a discounting method would see, for example, the marks from the best 100 credits being used in the degree classification calculation and the 20 credits with the weakest marks being discounted.

Our modelling considered the impact of the discounting rules introduced in the first classification algorithm in 2014-15 and maintained within the academic regulations for 2025-26. This considered only the best 100 credits at both Levels 5 and 6 in the classification calculation (with a 30-70 weighting). We excluded the discretionary borderline rules from the 2013-14 academic regulations to understand the impact of the discounting alone. Using the 2021-22 marks to provide a consistent set of module results, we modelled:

- Removal of the discounting at both Levels 5 and 6, with a 30-70 weighting (2013-14 academic regulations, algorithm 1).

- b. Application of the discounting of 20 credits at both Levels 5 and 6, with a 30-70 weighting (2014-15 academic regulations, algorithm 1, which continues to be used in the 2025-26 academic regulations).

Figure 3: Percentage of first and upper second class degrees by levels of discounting



Note: Before borderline adjustment.

This modelling of the changes to the university's algorithms for 2014-15 demonstrated that the number of first and upper second class degrees would be 7.1 percentage points higher than the algorithm from 2013-14 (79.5 per cent compared with 72.4 per cent).

When we asked about its use of multiple algorithms and discounting, the university responded by undertaking its own sector research on degree algorithms in 2024-25, and reported that despite the recommendations in Universities UK's sector guidance, out of 56 providers:

- '33 (58.9%) of [higher education institutions] have more than one way of calculating a classification outcome.
- 'Of the 33 [higher education institutions] that employ more than one approach to calculating a classification outcome, 21 (63.6%) indicate that the most favourable/highest/best outcome of the two (or more) calculations is applied to identify a student's Honours degree classification.

- '30 (53.5%) institutions use discounting in some format when classifying a degree outcome. The volume of discounting ranges from 20 to 60 credits, with the majority of providers discounting 40 credits.
- 'Of the 30 institutions that apply discounting, all 30 (100%) of the [higher education institutions] remove the lowest marks/grades and retain the best marks/grades within the classification calculation. We have not found examples of any institution that removes the highest grades'.

Summary

Our modelling has shown that the changes the university made in 2014-15, to introduce a third classification algorithm and discounting at Levels 5 and 6, would have increased the number of first and upper second class degrees awarded. However, our testing showed that the increase was not statistically significant. The university made changes in both 2014-15 and 2019-20, and provided an explanation of its reason for these changes and how it assured itself that the design of its regulations would ensure that its awards would reflect its own students' knowledge and skills. However, the university's explanations about how it assured itself that awards reflected knowledge and skills of students focused on the mapping of module outcomes and how they contribute to course learning outcomes, and the role played by external examiners, which did not sufficiently address how its classifications would reflect the attainment of its students.

Although it did not affect our assessment of the university's case or its merits, we recognise that the practice described by the university may be more widespread across the sector, as we have set out in our overview report. The OfS asks providers to ensure that, when making changes to academic regulations, they carefully consider how the resulting classifications will reflect students' knowledge and skills. Our overview report sets out our views on how providers can ensure this.

In terms of algorithm design, our modelling also shows the inflationary impact of using discounting rules and multiple algorithms to determine an individual student's attainment, both of which continue to be used in the university's academic regulations for 2025-26. The university has agreed to conduct a calibration exercise and use this to consider whether it needs to make any further amendments to its academic regulations.

Relevant OfS conditions of registration

Our assessment sought to understand the design of the university's academic regulations and whether the regulations produced awards that were credible at the time of being granted compared with those granted previously. These issues fall within the scope of ongoing condition of registration B4 (assessment and awards).

Condition B4.2 states that:

'Without prejudice to the principles and requirements provided for by any other condition of registration and the scope of B4.1, the provider must ensure that:

[...]

c. academic regulations are designed to ensure that relevant awards are credible.

[...]

e. relevant awards granted to students are credible at the point of being granted and when compared to those granted previously.

The definition of ‘credible’ as it relates to condition B4 is:

“‘credible’ means that, in the reasonable opinion of the OfS, relevant awards reflect students’ knowledge and skills [...].”

In determining whether awards are credible, the OfS has set out in condition B4.4.e.iii that it may consider any actions the provider has taken that would result in an increased number of relevant awards or changes in the classifications attached to them. This includes whether or not the achievement of students has increased – for example, changes to assessment practices or academic regulations.

Conclusions on compliance

The OfS’s modelling shows that the changes the university made in its 2014-15 academic regulations did not have, overall, a significant inflationary impact. We recognise and welcome the actions that the university took to remove the discretionary rules from the 2013-14 regulations, as these removed aspects of its regulations that were inflationary.

The university has provided evidence to show that it had considered the impact of the changes to the 2014-15 academic regulations and that it had assurance processes in place to ensure comparability with other providers. We accept that this is standard practice. However, we think further work is needed to ensure an appropriate connection between the actual attainment of students as evidenced by assessed student work in aggregate, and the class of degrees awarded. This is important to establish that awards reflect students’ knowledge and skills.

The university removed its third algorithm from 2020-21 because it was rarely used. However, the university has retained the use of two algorithms, along with discounting. Given that these aspects of algorithm design are likely to be inflationary, we are concerned that this practice needs to be tested to ensure that awards appropriately reflect students’ knowledge and skills.

In conclusion, therefore, the OfS found that **the university is at increased risk of breaching condition B4**. We engaged with the university on these issues and it has agreed to take the actions set out below to resolve the increased risk. These address elements of concern in its regulations and will provide assurance that awards made under those regulations reflect the knowledge and skills of students. For this reason, the OfS is **not taking any further action** in relation to this matter.

In considering our regulatory response, we have had regard to matters including the relevant intervention factors and the OfS’s general duties.⁷

In light of these concerns the university has agreed to:

⁷ See OfS, [Overview of monitoring of risk for registered providers](#); [Part I of the regulatory framework: The OfS’s risk-based approach](#).

- a. Conduct a calibration exercise (see below) for its bachelors' degree classification algorithm or any algorithm it intends to introduce from September 2026. As part of this review, it will consider whether it will continue to include either discounting of credits with the lowest marks or determining a classification by the best result from multiple algorithms, in the light of our concerns about the inherently inflationary nature of such rules.
- b. Report back to the OfS on these matters.

The OfS will review its assessment of the university's compliance with conditions of registration when the university has completed these actions.⁸

'Calibration exercise' means a rigorous exercise using objective academic judgement to assess whether the class of degree awarded appropriately reflects the level of knowledge and skills attained by students in their assessed work, across the full range of profiles of attainment that translate to that class of award. This should be done with reference to our sector-recognised standards and relevant course documentation.

This will be done by:

- a. Considering the aggregate achievement of individual students, where those students are representative of the full range of profiles of attainment.
- b. Confirming whether that student achievement justifies the classes of degrees awarded to those students.
- c. Referencing the OfS's sector-recognised standards and the university's own statements of the knowledge and skills a student should have demonstrated at the end of the course, such as course outcomes.⁹

Further details of our views on bachelors' degree classification algorithms and compliance with our conditions, including on the use of calibration exercises, can be found in our overview report.¹⁰

⁸ See OfS, [Overview of monitoring of risk for registered providers](#).

⁹ See OfS, [Sector-recognised standards](#).

¹⁰ See OfS, ['Bachelors' degree classification algorithms'](#).