

Office for  
Students



# Annual Financial Return 2024 (AFR24) data checking tool

AFR24 data checking tool technical  
document and rebuild instructions

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# Summary

1. This document describes the algorithms applied to the Student (23056) record submitted to the designated data body (DDB) to generate a provider's higher education student full-time equivalent (FTE) numbers, as required in Tables 7 and 7a in the Annual Financial Return 2024 (AFR24) workbook. Throughout the document, fields taken or derived from the Student (23056) record are shown in capitals.
2. The data in the AFR24 data checking tool outputs can be used by higher education providers to verify and correct their 2023-24 individualised student data. They can also be used to help populate Tables 7 and 7a in their AFR24 workbook. The outputs are also an opportunity for providers to give feedback on any potential issues with Office for Students (OfS) algorithms and are not intended to be used for any other purpose.
3. Please note that this document is only intended for providers whose financial year end aligns with the academic year used in the Student record, i.e. 31 July 2024. AFR24 data checking tool outputs will only be available for these providers.
4. The AFR24 output contains the following files:
  - a. AFR24 DCT workbook 'AFR24\_DCT\_XXXXXXXX.xlsx'
  - b. AFR24 DCT individualised file 'AFR24\_DCT\_XXXXXXXX\_IND.csv'where XXXXXXXX is the UK Provider Reference Number (UKPRN) for the provider.
5. These files can be accessed through the Higher Education Statistics Agency (HESA) Data Platform.<sup>1</sup> Once your submitted data has been processed, your file can be downloaded from the 'IRIS' report, under the section 'Additional Collection Reports'.
6. Details of how to use individualised files are given on the OfS website at: <http://www.officeforstudents.org.uk/data-and-analysis/supplying-data/working-with-individualised-files>.
7. This document is aimed at readers with in-depth knowledge of the data. It builds on both HESA Legacy (2020-21 and 2021-22) and HESA Data Futures (2022-23 and 2023-24) items. Readers are advised to refer to a copy of the Student record – 23056 coding manual,<sup>2</sup> 22056 coding manual<sup>3</sup> and 2021-22 for Legacy items.<sup>4</sup>
8. We will document in the data checking tool section of the OfS website any changes or corrections to the algorithms in this document.<sup>5</sup>

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<sup>1</sup> See [HESA Data Platform](#).

<sup>2</sup> See [Student record – 23056 coding manual](#).

<sup>3</sup> See [Student record – 22056 coding manual](#).

<sup>4</sup> See [Student record – HESA Legacy 2021-22 coding manual](#).

<sup>5</sup> See [The OfS website – Data checking tool](#).

# Terminology

1. The algorithms below apply to the Student (23056) collection.
2. In the Student (23056) return, the fields that we use are associated with a student engagement.
3. The academic year '2023-24' below refers to the academic year starting on 1 August 2023 and ending on 31 July 2024.

# AFR24 output file

## Workbook

4. The AFR24 DCT workbook is the Excel workbook AFR24\_DCT\_XXXXXXXX.xlsx, which contains the following worksheets:

**Table 1: Worksheets in the AFR24 DCT workbook**

Worksheet*	Title
Coversheet	Annual Financial Return 2024 higher education student FTEs data summary.
Table 7 FTEs	Annual Financial Return 2024 higher education student FTEs data summary.
Table 7a FTEs	Annual Financial Return 2024 higher education non-UK student FTEs data summary by domicile.

\* This worksheet reference corresponds to the spreadsheet tabs.

## Individualised file

5. The individualised student data file (AFR24\_DCT\_XXXXXXXX\_IND.csv) is supplied for transparency and to help providers that wish to derive FTEs using the OfS methodology. The individualised file contains the values of all the fields used to generate the data summary tables.
6. Fields taken from the Student (23056) return or derived as part of the AFR24 DCT output are shown in capitals using the names given in Tables 2 and 3.
7. Specific instructions for rebuilding the AFR student FTE data summary workbook from the individualised file are provided in this document.
8. For Student (23056) data the individualised file contains one row per engagement (each unique combination of UKPRN, SID and NUMHUS). A student may have more than one engagement. We will use the generic term 'student' in this technical document and the AFR24 DCT workbook to refer to one student engagement.

## 2023-24 fields used to create the AFR24 outputs

9. The Student fields used to generate the AFR outputs are listed in Table 2.
10. HESA Legacy (2020-21 and 2021-22) fields have been converted to Student (23056) fields using the HESA Legacy to Data Futures Mapping Guides.<sup>6</sup>

**Table 2: Student (23056 & 22056) fields used in the AFR FTE calculations**

Entity	Name	Description
Engagement	UKPRN	UK Provider Reference Number
Engagement	SID	Student identifier
Engagement	NUMHUS	Engagement number
Engagement	ENGSTARTDATE	Engagement start date
Qualification	QUALCAT	Qualification category
Engagement	SCSESSIONID	Student course session identifier
Engagement	SCSSTARTDATE	Student course session start date
Engagement	SCSENDDATE	Student course session end date
Engagement	PREPFLAG	Preparatory student course session flag
Engagement derived field	Z_STULOAD_CYC	Derived field represents the total student load for the engagement across the cycle
Engagement derived field	Z_MODEGRP1	Derived field represents the grouping of the student's mode of study for the engagement (granularity level 1)
Engagement derived field	Z_PERMADDCOUNTRY	Derived field represents the grouping of the location of the student's permanent home address prior to entry to the course (granularity level country)
Engagement derived field	Z_PERMADDGRP4	Derived field represents the grouping of the location of the student's permanent home address prior to entry to the course (granularity level UK home nations, crown dependencies and Europe)
Engagement derived field	Z_LEVELGRP2	Derived field represents the grouping of the student's course level for the engagement (granularity level 2)
Engagement derived field	Z_POPSES_CYC	Derived field represents a marker for if the engagement is in the session population during the cycle

<sup>6</sup> See [HESA Legacy to Data Futures Mapping Guides](#).

## Description of derived fields

11. The derived fields used to generate the AFR outputs are listed in Table 3.
12. Definitions of these fields can be found on pages 71-74 in the 'Guidance on completing the Annual Financial Return 2024 workbook' document.<sup>7</sup>
13. Fields with a suffix marked (yr) have multiple values that correspond to the end of each academic year, as indicated by SOURCE. For example: If SOURCE = 2023-24, then AFRDOMICILE(yr) is AFRDOMICILE2024.

**Table 3: Description of derived fields for recreating tables**

Derived field name	Description	Paragraph
SOURCE	The reporting period of the student collection.	14
AFRDOMICILE(yr)	Domicile as UK or Non-UK.	15
AFRMODE(yr)	Mode of study.	17
AFRLEVEL(yr)	Level of study.	19
AFRPOP(yr)	Identifies if a student is counted within the AFR population.	21
AFRFTE(yr)	Total student load for an engagement in full-time equivalents.	23
AFRENTRANT(yr)	Identifies if a student was an entrant in this year.	25
AFRUG(yr)	Indicates whether the student was engaged in undergraduate study in this year.	27
AFRPGT(yr)	Indicates whether the student was engaged in postgraduate taught study in this year.	29
AFRPGR(yr)	Indicates whether the student was engaged in postgraduate research study in this year.	31
AFRFYE(yr)	The provider's year-end date for the financial year.	33
AFRENGSTARTDATE	Engagement start date, or if there is a preparatory course and student is now in the main course, the session start date following the preparatory course.	35
AFRCOUNTRY(yr)	Country of permanent home address.	36

<sup>7</sup> See [The OfS website – Regulatory advice 14](#).

## Derived fields for calculating higher education FTE

### SOURCE

14. This field contains the reporting period of the student collection that the instance/engagement was returned. For example, for records returned in the 2023-24 academic year student collection (23056), SOURCE = 2023-24.

### AFRDOMICILE(yr)

15. This field allocates students to a domicile for each academic year.

16. (yr) values include 2021, 2022, 2023 and 2024.

**Table 4: AFRDOMICILE definition**

Value	Description	Definition
UK	UK-domiciled students	Z_PERMADDGRP4 = 01, 02, 03, 04
Non-UK	Non-UK-domiciled students	Z_PERMADDGRP4 = 05, 06, 07
<i>Blank</i>	Otherwise	Otherwise

### AFRMODE(yr)

17. This field allocates students to a mode of study for each academic year.

18. (yr) values include 2021, 2022, 2023 and 2024.

**Table 5: AFRMODE definition**

Value	Description	Definition
FTS	Full-time	Z_MODEGRP1 = 01
PT	Part-time	Z_MODEGRP1 = 02
<i>Blank</i>	Otherwise	Otherwise

### AFRLEVEL(yr)

19. This field allocates students to a level of study for each academic year.

20. (yr) values include 2021, 2022, 2023 and 2024.



**Table 6: AFRLEVEL definition**

Value	Description	Definition
UG	Undergraduate	Z_LEVELGRP2 = 03, 04
PGCE	PGCE (full-time only)	Z_LEVELGRP2 = 02 and QUALCAT = M0016
PGT	Postgraduate taught (excluding PGCE)	Z_LEVELGRP2 = 02 (does not include PGCE full-time students)
PGR	Postgraduate research	Z_LEVELGRP2 = 01
<i>Blank</i>	Otherwise	Otherwise

### **AFRPOP(yr)**

21. This field identifies if a student is counted within the AFR population for each academic year. It determines whether to count AFRFTE for an engagement/instance.

22. (yr) values include 2021, 2022, 2023 and 2024.

**Table 7: AFRPOP definition**

Value	Description	Definition
1	Included	Z_POPSES_CYC = 1
0	Not included	Z_POPSES_CYC = 0

### **AFRFTE(yr)**

23. This field contains the total student load for an engagement in each academic year.

24. (yr) values include 2021, 2022, 2023 and 2024.

### **AFRETRANT(yr)**

25. This field identifies students who were entrants in each academic year.

26. (yr) values include 2023 and 2024.

**Table 8: AFRETRANT definition**

Value	Description	Definition
1	Has not been active at the same broad level at the registering provider in either of the two previous academic years, linked by UKPRN and SID	AFRENGSTARTDATE > AFRFYE(yr - 1) and ( (AFRLEVEL(yr) = UG and AFRUG(yr - 1) = 0 and AFRUG(yr - 2) = 0) or (AFRLEVEL(yr) = PGT, PGCE and AFRPGT(yr - 1) = 0 and AFRPGT(yr - 2) = 0) or (AFRLEVEL(yr) = PGR and AFRPGR(YYYY-1) = 0 and AFRPGR(YYYY-2) = 0) )
0	Otherwise	Otherwise

### **AFRUG(yr)**

27. This field indicates whether the student (SID/HUSID) was engaged in undergraduate taught study in the academic year ending in (yr).

28. (yr) values include 2021, 2022, 2023 and 2024.

### **AFRPGT(yr)**

29. This field indicates whether the student (SID/HUSID) was engaged in postgraduate taught study in the academic year ending in (yr).

30. (yr) values include 2021, 2022, 2023 and 2024.

### **AFRPGR(yr)**

31. This field indicates whether the student (SID/HUSID) was engaged in postgraduate research study in the academic year ending in (yr).

32. (yr) values include 2021, 2022, 2023 and 2024.

### **AFRFYE(year)**

33. These fields contain each of the provider's financial year end dates.

34. (year) values include 2023 and 2024.

### **AFRENGSTARTDATE**

35. This field contains the engagement's start date (ENGSTARTDATE) unless the engagement began with a preparatory course. In this case it contains the student course session start date (SCSSTARTDATE) of the following student course session (SCS), which is assumed to be the main course.

**Table 9: AFRENGSTARTDATE definition**

Value	Description	Definition
SCSSTARTDATE of the first SCS that starts after the preparatory course	Engagement began with a preparatory course and is now in the main course	An SCS exists where PREPFLAG = BLANK alongside another earlier SCS for this combination of SID and NUMHUS. The earlier SCS is their first SCS of the engagement and it is a preparatory course (where PREPFLAG = 01, 02, 03 and ENGSTARTDATE = SCSSTARTDATE)
ENGSTARTDATE	Otherwise	Otherwise

**AFRCOUNTRY(yr)**

36. This field allocates students to a country of their permanent home address.

37. (yr) values include 2021, 2022, 2023 and 2024.

**Table 10: AFRCOUNTRY definition**

Value	Description	Definition
UK	Permanent home address country of UK	Z_PERMADDGRP4 = 01, 02, 03, 04
China	Permanent home address country of China	Z_PERMADDCOUNTRY = CN
India	Permanent home address country of India	Z_PERMADDCOUNTRY = IN
Nigeria	Permanent home address country of Nigeria	Z_PERMADDCOUNTRY = NG
Pakistan	Permanent home address country of Pakistan	Z_PERMADDCOUNTRY = PK
USA	Permanent home address country of USA	Z_PERMADDCOUNTRY = US
Bangladesh	Permanent home address country of Bangladesh	Z_PERMADDCOUNTRY = BD
Other Domiciles	Otherwise	Otherwise

## Rebuild instructions

38. The individualised file, 'AFR24\_DCT\_XXXXXXXXX\_IND.csv', can be used to interrogate the data and our calculation of derived fields by filtering to certain groups of records.
39. Specific instructions to rebuild the AFR24 DCT workbook, 'AFR24\_DCT\_XXXXXXXXX.xlsx', are provided here. Full details of how to access and use an individualised file are given on the OfS website: [www.officeforstudents.org.uk/data-and-analysis/supplying-data/working-with-individualised-files](http://www.officeforstudents.org.uk/data-and-analysis/supplying-data/working-with-individualised-files).
40. If using Microsoft Excel, filters can be used on the relevant columns in the spreadsheet to filter the records to those required for each definition. The SUBTOTAL function can then be used with option 9 to give the sum of FTE.
41. Note that if you are trying to rebuild the figures from your provider's data, you will need to combine multiple years of data to derive entrant information. For the DCT outputs, this has been done in advance using data held by the OfS.

### Rebuild instructions for Table 7 FTEs

42. Table 11 describes the steps involved in rebuilding the student FTEs in the Table 7 FTEs worksheet in the AFR24 DCT workbook.

**Table 11: Rebuild instructions for Table 7 FTEs**

Step	Description	Value	Rebuild instructions
1	Select the year	Year 1 (yr = 2023)	AFRPOP2023 = 1
		Year 2 (yr = 2024)	AFRPOP2024 = 1
2	Select the domicile	UK	AFRDOMICILE(yr) = "UK"
		Non-UK	AFRDOMICILE(yr) = "Non-UK"
3	Select the cohort	Entrants	AFRETRANT(yr) = 1
		Continuing	AFRETRANT(yr) = 0
4	Select the mode of study	Full-time	AFRMODE(yr) = "FTS"
		Part-time	AFRMODE(yr) = "PT"
5	Select the level of study	Undergraduate	AFRLEVEL(yr) = "UG"
		Postgraduate taught	AFRLEVEL(yr) = "PGT", "PGCE"
		Postgraduate taught (excluding PGCE)	AFRLEVEL(yr) = "PGT"
		PGCE	AFRLEVEL(yr) = "PGCE"
		Postgraduate research	AFRLEVEL(yr) = "PGR"
6	Calculate the sum of FTE		Sum of AFRFTE(yr)

## Rebuild instructions for Table 7a FTEs

43. Table 12 describes the steps involved in rebuilding the student FTEs in the Table 7a FTEs worksheet in the AFR24 DCT workbook.

**Table 12: Rebuild instructions for Table 7a FTEs**

Step	Description	Value	Rebuild instructions
1	Select the year	Year 2 (yr = 2024)	AFRPOP2024 = 1
2	Select the domicile	Non-UK	AFRDOMICILE2024 = "Non-UK"
3	Select the cohort	Entrants	AFRENTRANT2024 = 1
4	Select the country of domicile	China	AFRCOUNTRY2024 = "China"
		India	AFRCOUNTRY2024 = "India"
		Nigeria	AFRCOUNTRY2024 = "Nigeria"
		Pakistan	AFRCOUNTRY2024 = "Pakistan"
		USA	AFRCOUNTRY2024 = "USA"
		Bangladesh	AFRCOUNTRY2024 = "Bangladesh"
		Other Domiciles	AFRCOUNTRY2024 = "Other Domiciles"
5	Select the mode of study	Full-time	AFRMODE2024 = "FTS"
		Part-time	AFRMODE2024 = "PT"
6	Select the level of study	Undergraduate	AFRLEVEL2024= "UG"
		Postgraduate taught	AFRLEVEL2024= "PGT", "PGCE"
		Postgraduate taught (excluding PGCE)	AFRLEVEL2024= "PGT"
		PGCE	AFRLEVEL2024= "PGCE"
		Postgraduate research	AFRLEVEL2024= "PGR"
7	Calculate the sum of FTE		Sum of AFRFTE2024



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