

HOW TO USE THE HESA XML DATA ENTRY TOOL

WHAT IS THE TOOL?

The data entry tool is a piece of software that allows users to input the data they have collected and if necessary amend an existing XML data file. The tool has been created by HESA to allow users to produce XML data in the format required for the submission to HESA.

Please note:

- Whilst the data entry tool has some in-built validation, it will not perform all schema or business logic checks.
- The data entry tool is designed to be worked on by a single user at any single time. Multiple users may install and use the tool and work off a centrally located file, but users will not be able to work on the file at the same time.
- The data entry tool has only been developed for Windows PC and not for the Mac operating system; it is possible to run the tool on a dual boot Mac or via a remote desktop function to a machine running Windows.

RUNNING THE TOOL

Double-click on the XML data entry tool icon located on your desktop, or alternatively select and open the file from its saved location on your PC.

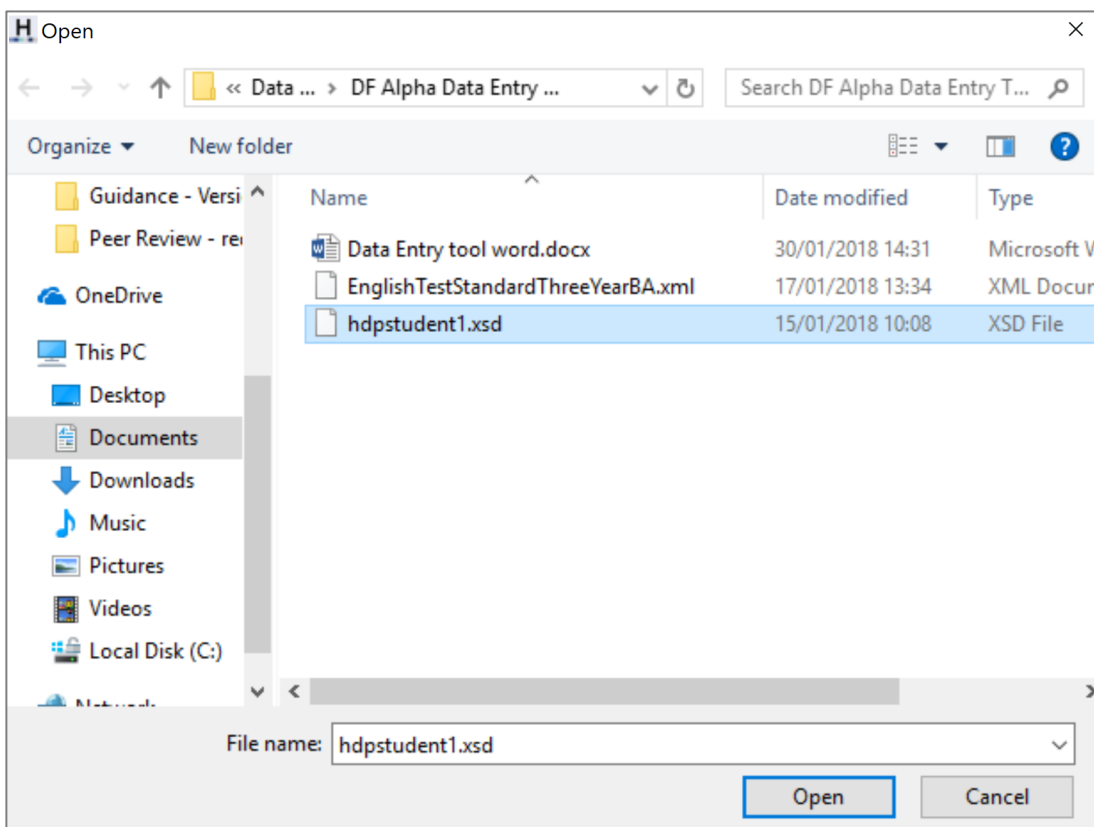
You will be taken to the front page of the data entry tool.

Opening an XSD

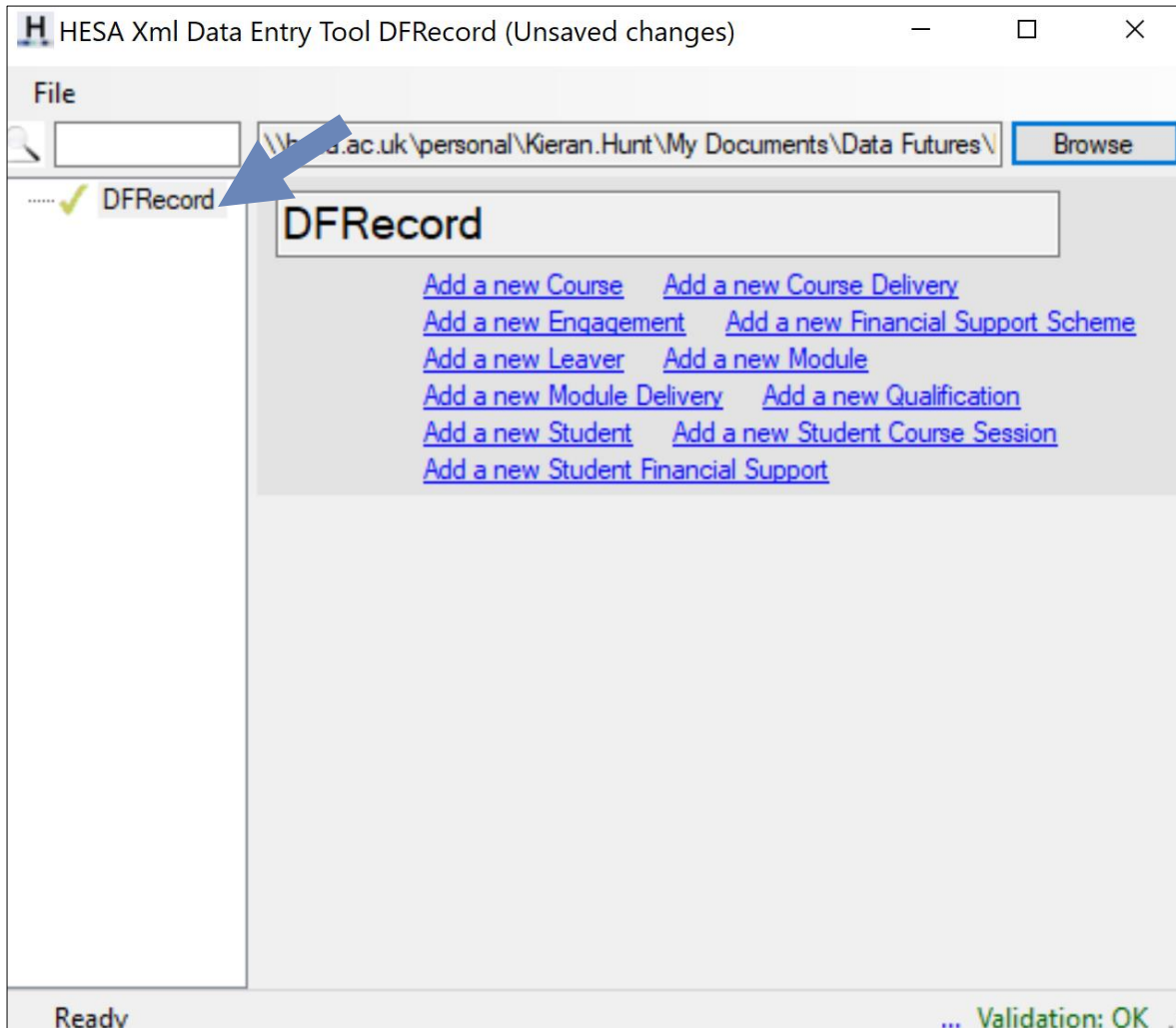
Before you can begin working on generating your file you must open the appropriate XSD for the collection.

You can download the XSD from the [2019/20 Coding manual](#)

Once downloaded you must select 'browse' to choose the XSD.



When the xsd is opened, it will then inform you the collection the the schema relates to.



From this screen you can begin work on a new XML file, **or** you can go back to a saved XML file that you were previously working on by going to File > Open and selecting the appropriate file.

Once opened you can then begin adding the entities of the 2019/20 Student return.

When creating a new file, codes are entered into a free text box, or selected from the drop-down box next to the short name for that field. Below is a short extract of an XML file created using the tool

```
<?xml version="1.0"?>
<DFRecord>
  - <Course>
    <COURSEID>BAPOL</COURSEID>
    <BITTM>00</BITTM>
    <COURSENAME>BA Politics</COURSENAME>
    <TTCID>00</TTCID>
  - <CourseRole>
    <HESAID>99998001</HESAID>
    <ROLETYPE>100</ROLETYPE>
  </CourseRole>
  - <CourseSubject>
    <SBJCA>100491</SBJCA>
    <SBJPCNT>100</SBJPCNT>
  </CourseSubject>
</Course>
  - <CourseDelivery>
    <COUDELID>BAPOL17FT</COUDELID>
    <BRIDGE>01</BRIDGE>
    <COURSEDELIVERYTITLE>BA Politics Full Time</COURSEDELIVERYTITLE>
  </CourseDelivery>
</DFRecord>
```

DATA ENTRY TOOL KEY – INTERACTION WITH THE SYSTEM

Mandatory fields

For each field, the tool will indicate if a field is mandatory by the 'Required' flag:

Blank or empty boxes indicate a free text field to return, which can be determined by each provider. Please note, that where primary keys exist to link entities you must ensure that these are returned.

The screenshot shows a web application window titled "HESA Xml Data Entry Tool DFRecord (Unsaved changes)". The interface includes a file explorer on the left showing a tree view with "DFRecord" and "Course BAPOL". The main content area displays the "Course BAPOL" form with the following fields:

- COURSEID:** BAPOL
- BITTM:** None (dropdown menu)
- COURSENAME:** BA Politics
- TTCID:** None (dropdown menu)
- action:** None (dropdown menu)

A red "Required" label is positioned to the right of the TTCID field. Above the form, there are several blue hyperlinks: "Add another Course", "Add a new Course Identifier", "Add a new Course Role", "Add a new Course Subject", and "Add a new Curriculum Accreditation".

Actions

The final field that you will see in each entity is the 'action' field. This tells HESA what to do with the data on receipt.

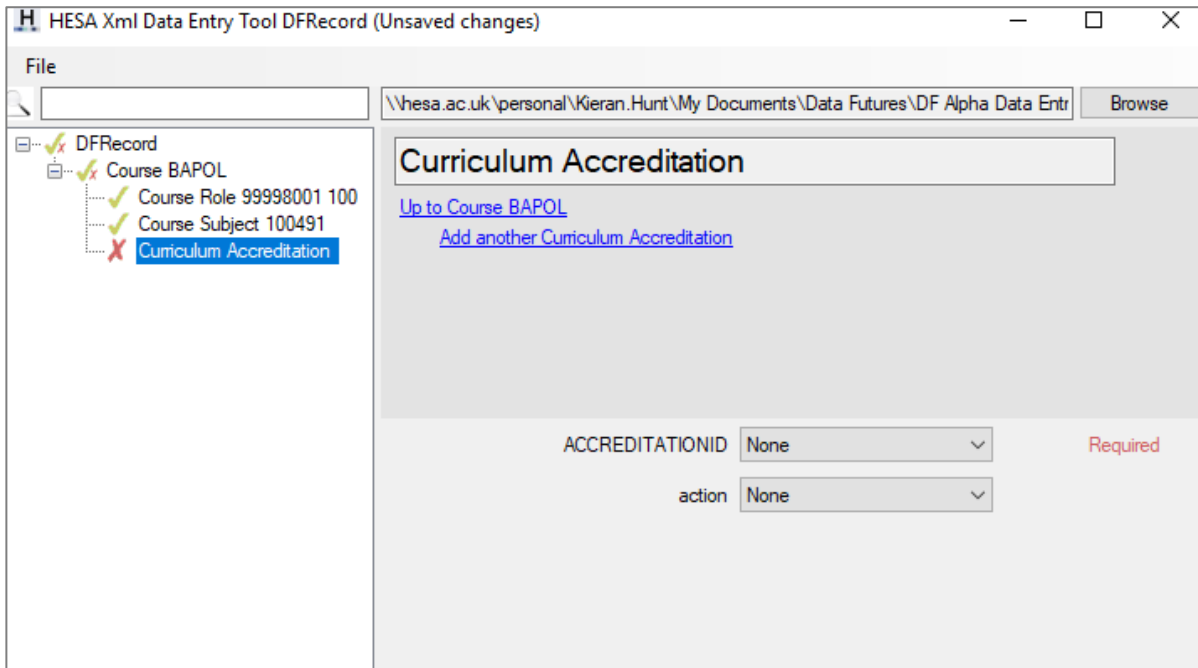
Upsert: DEFAULT: Insert the record if it does not already exist, else update the existing record.

Delete: Delete any record that has the specified primary key, this function allows you to produce a file in the correct format for the entity to be deleted from the online system when the file is uploaded.

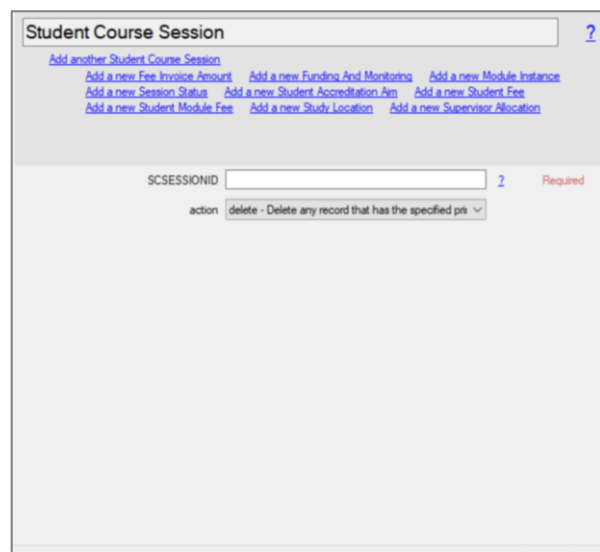
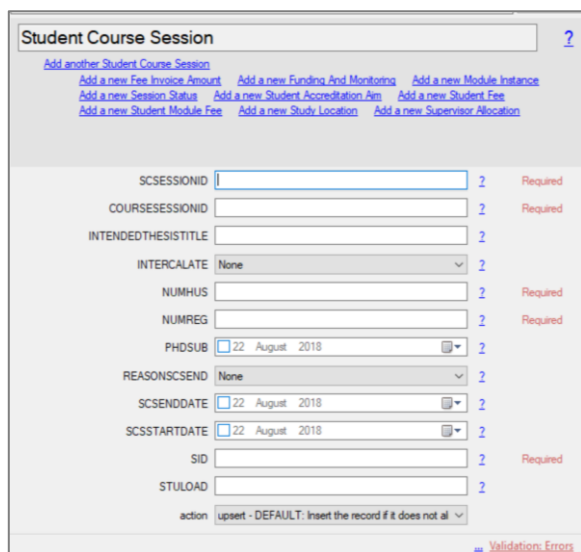
Identify: Perform no action – an action of 'identify' signifies that the record is provided only to give context to a nested record. This action can only be used in conjunction with the deletion of a child entity (see below).

Deleting or removing entities from the Data Entry Tool

Individual entities (e.g. in this case Curriculum Accreditation) can be deleted from the file by selecting them on the left-hand side of the tool and pressing the 'delete' button on your keyboard. A prompt will then ask for this action to be confirmed. Please note that this type of deletion will only remove data from the file that you are working on and will not indicate to HESA that the record should be deleted.



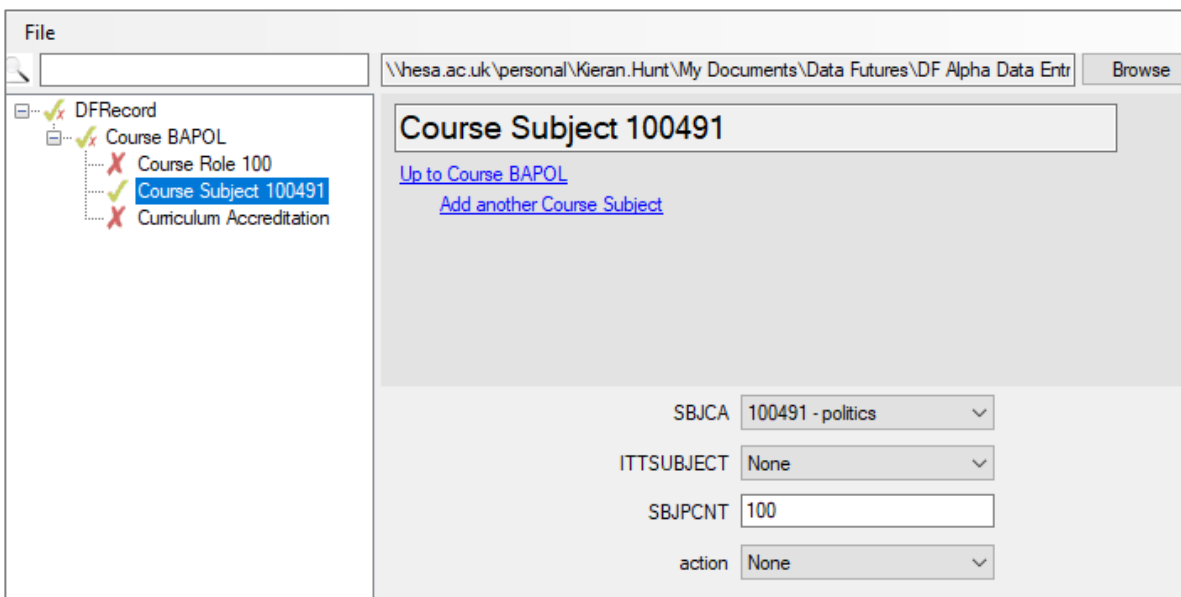
To instruct HESA to delete data from its database you must use the 'delete' action. The data entry tool supports minimal context deletes, which means that the XML produced for the deleted entity will contain only the required identifying fields. When you select 'delete' in the action field for an entity you will notice that the fields displayed for the entity in the tool are reduced:



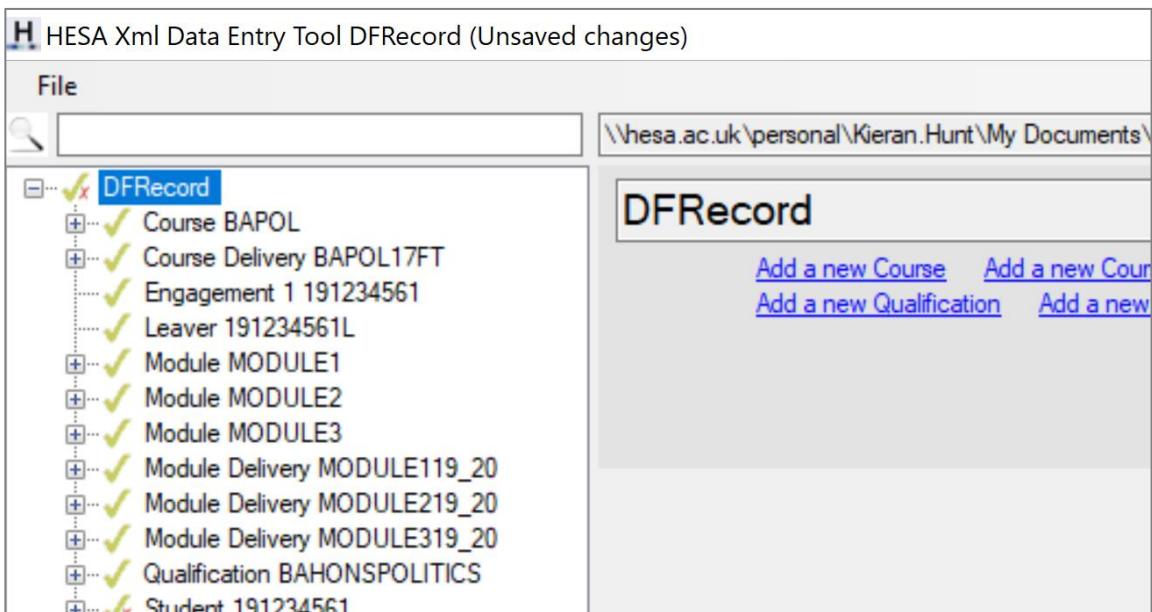
The key fields, in the example above StudentCourseSession.SCSESSIONID, are all that is required for HESA to process a delete to the entity. If you select 'delete' by accident, you can change the action to 'upsert' and the tool will restore the full information for the entity.

Navigating the display

The tool will indicate whether or not all mandatory fields have been completed for the file in a summary at the top left of the screen. Where fields are missing it will report crosses:



Where fields have been completed with valid information, ticks will be displayed:



Error validation

The tool is also able to pick up where schema errors are present in the data being collected. This will be highlighted in the bottom right of the tool:



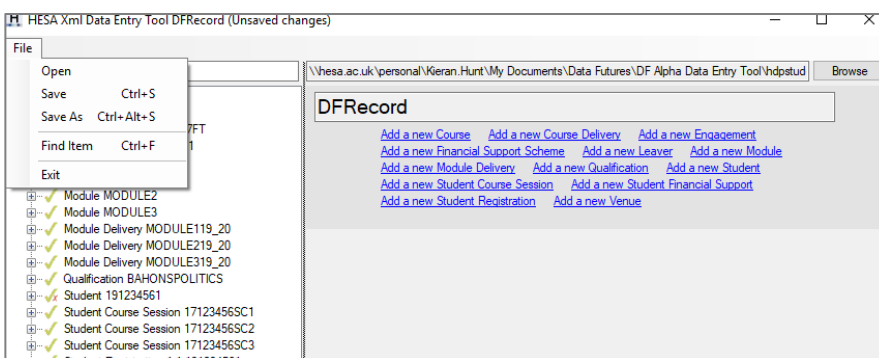
If this link is clicked on, the tool will display the detail of these errors:

Severity	Message
Error	The 'action' attribute is invalid - The value "" is invalid according to its datatype 'action' - The Enumeration constraint failed.
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Error	The 'action' attribute is invalid - The value "" is invalid according to its datatype 'action' - The Enumeration constraint failed.
Error	The 'VALIDFROM' element is invalid - The value "" is invalid according to its datatype 'Dependant_VALIDFROM' - The string "" is
Error	The 'action' attribute is invalid - The value "" is invalid according to its datatype 'action' - The Enumeration constraint failed.
Error	The 'VALIDFROM' element is invalid - The value "" is invalid according to its datatype 'Disability_VALIDFROM' - The string "" is n

Schema errors occur where there is a problem with the structure or order of the file, or an invalid character is included.

Saving the file

To save the progress you have made select 'File > Save As'



Please select the location on your computer where you wish to save the file. Remember this location, as you may need the file for further use later to make amendments to the data.