

Student Interface File to University Directory

August 13, 1999

DRAFT

File Layout

Header Record

Data Element Name	Start Col.	End Col.	Length	Data Type	Valid Values
Record Code	1	1	1	char	'H'
Student Location Code	2	3	2	char	'01' - '09'
File Name	4	11	8	char	'UDIRSTUD'
Creation Date	12	19	8	char	<i>note:</i> date field (yyyymmdd)
FILLER	20	246	227	char	blanks

The first record on the student interface file must be a Header Record. There should be one and only one Header Record on each student interface file.

Trailer Record

Data Element Name	Start Col.	End Col.	Length	Data Type	Valid Values
Record Code	1	1	1	char	'T'
Student Location Code	2	3	2	char	'01' - '09'
File Name	4	11	8	char	'UDIRSTUD'
Data Record Count	12	19	8	char	<i>note:</i> include leading zeroes; count excludes Header and Trailer
FILLER	20	246	227	char	blanks

The last record on the student interface file must be a Trailer Record. There should be one and only one Trailer Record on each student interface file.

Data Record (Add, Change, Delete)

Data Element Name	Start Col.	End Col.	Length	Data Type	Valid Values
Student Location Code	1	2	2	char	'01' - '09'
Student ID (Registration Number)	3	42	40	char	one-way hashed value <i>note:</i> this field uses a one-way hash because some campuses use SSN as their Student ID
UC Student Vendor ID	43	49	7	char	<i>note:</i> ETS is current undergraduate vendor; use blanks for non-undergraduates
Social Security Number (SSN)	50	89	40	char	one-way hashed value <i>note:</i> if none, then pass blanks
Campus ID	90	121	32	char	<i>note:</i> optional; left-justify if less than 32 chars and pad with trailing values set to blank characters; if none, then pad with values set to blank characters
Net ID	122	131	10	char	<i>note:</i> optional; left-justify if less than 10 chars; pad with trailing values set to blank characters; if none, then pad with values set to blank characters
Attribute Services Release Flag	132	132	1	char	'Y' or 'N'
Student Last Name	133	172	40	char	<i>note:</i> data may be passed in mixed case format
Student First Name (middle)	173	212	40	char	<i>note:</i> data may be passed in mixed case format

Student Type	213	213	1	char	'U', 'G', 'P', 'E', 'X'
Student Status	214	214	1	char	'A', 'R', 'B', 'W', 'F'
Student Term Begin Date	215	222	8	char	<i>note:</i> date field (yyyymmdd)
Student Term End Date	223	230	8	char	<i>note:</i> date field (yyyymmdd)
Student Term Eligibility Begin Date	231	238	8	char	<i>note:</i> date field (yyyymmdd)
Student Term Eligibility End Date	239	246	8	char	<i>note:</i> date field (yyyymmdd)

Data Records are neither the first or last records on the student interface file and given that “full volume” data interfaces are to be submitted, each interface should always have Data Records in addition to always having a Header Record and a Trailer Record.

Edit Specifications

The following provides additional information on data elements passed on the student interface file that should clarify how data is to be processed and submitted to the University Directory. Thus, not all data elements on the student interface file are listed below; only those requiring further clarification are cited.

Data Element Name	Additional Information
Student Location Code	'01' - BK, '02' - SF, '03' - DV, '04' - LA, '05' - RV, '06' - SD, '07' - SC, '08' - SB, '09' - IR
Student ID (Registration Number)	uses one-way hash algorithm (see <i>General Notes</i>) which results in a 40 byte field after blank space delimiters are removed from the hashed field value
Social Security Number (SSN)	uses one-way hash algorithm (see <i>General Notes</i>) which results in a 40 byte field after blank space delimiters are removed from the hashed field value
Attribute Services Release Flag	'Y' - "attribute services" are permitted 'N' - "attribute services" are not permitted

The value passed on most, if not all, records would most likely be set to 'Y'; such a value does not, in and of itself, allow a student access to externally published library materials, for example, but it does allow a digital certificate for that student to be processed via attribute services in order to determine if the student is eligible for such access; passing a value of 'N' would not even allow such determination to be attempted

note: the "attribute services" would be applicable to the following student data housed in the University Directory:

- Student Location Code
- Net ID
- Student Type
- Student Status
- Student Term date fields (4)

Student Type	'P' – Professional Schools, e.g., DDS, JD, MD 'G' - Graduate 'U' - Undergraduate 'E' - Extension 'X' - other, e.g., official "on-leave"
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note: Post Docs, Medical Residents (health science campuses,) and Official On-Leave would be identified

as 'X' – other

Also note that if a student concurrently has multiple Student Type values and has the same Student ID, then the above listing of values should also be used to determine which value should be passed on the student's single record; for example, if a student is both a Graduate student and an Undergraduate student with the same Student ID, then the single record passed on the interface should pass a Student Type value of 'G'; thus, 'P' represents the "highest" value and 'X' represents the "lowest" value in terms of addressing this issue

Student Status

- 'A' - Admitted, which includes those students who have been admitted to a campus, but who are not yet defined as being "registered"
- 'R' - Registered, which includes those students who have paid their registration fees for the current term, but may also include other criteria, e.g., enrolled, has no registration blocks
- 'B' - Blocked, which includes those students who may have been originally defined as "registered", but who have subsequently had a "block" or "hold" placed on them
- 'W' - Withdrawn, which includes those students who may have been originally defined as "registered", but who have subsequently withdrawn
- 'F' - Filing Fee, which includes those students not technically defined as "registered", but who are entitled to similar services

Student Term Begin Eligibility Date

This field will allow campuses who wish to effect a "grace period" for potential services to be started prior to the official start of the term; this may most commonly be used for newly entering students rather than continuing students; for those campuses not wishing to effect such a "grace period", then the same value passed in the Student Term Begin Date field should be passed

Student Term End Eligibility Date

This field will allow campuses who wish to effect a "grace period" for potential services to be extended, though the term may have actually ended; this may most commonly be used for continuing students rather than for newly entering students; for those campuses not wishing to effect such a "grace period", then the same value passed in the Student Term End Date field should be passed

General Notes:

- all alpha character data should be submitted in upper case format only except for the Student Last Name and Student First Name (middle) fields which may be passed in mixed case format
- for character data elements whose values should be left-justified if less than the maximum length, the data elements should be padded with trailing blanks, e.g., if maximum length is 10 and if the actual value is, for example, '12345', then the value passed should be '12345' followed by 5 blank characters
- for continuing undergraduate students, if not available, the value passed for the UC Student Vendor ID field may be passed as blanks
- **SHA-1** is the one-way hash algorithm required for encrypting selected fields on the student interface; this algorithm is executable on a variety of platforms and the UCOP University Directory liaison may be contacted to obtain further information
- Attribute Services Release Flag example:

Suppose an agreement is reached with an external publisher to allow “all students” at 2 UC campuses (UCSD and UCI) access to externally published materials over the web. Rather than using ranges of IP addresses or new logins/passwords for authentication, a web application to access the materials could be developed whereby a UC San Diego or UC Irvine student would access the publisher's web application and then "submit" the appropriate digital certificate; the publisher's application would glean the Net ID from the certificate and execute a query to the appropriate *attribute server* (basically keyed by Net ID) that would return a confirmation that the holder of that certificate was eligible (or not) to access the materials based on his/her status as a UC San Diego or UC Irvine registered student. Anonymity beyond that level of information would thus be retained as well, i.e., the only things that the publisher might know is that Net ID belongs to a registered student at one of the eligible campuses; the publisher would not know the student's name. Other fields would be used to support similar types of queries.

It should be noted that among the necessary fields for a student to access the externally published materials over the web in the above example, the student would need to have an Attribute Services Release Flag value of ‘Y’ when accessing the web site using her/his own digital certificate. If the student’s Attribute Services Release Flag value is ‘N’, then the student would be ineligible to access the externally published using her/his own digital certificate; the student could also be deemed ineligible if the application were defined to exclude students whose Status Status is ‘W’ (withdrawn) or if outside a designated date period based on dates in the Student Term Eligibility Begin Date and Student Term Eligibility End Date fields.

notice-and-disclaimer: The above example application does **not** currently exist and this fictitious application is only being described above in an attempt to clarify usage of the Attribute Services Release Flag.