

Order Upload Process

Version 5

For

Core Ordering & Reporting Enterprise System

(C.O.R.E.S.)

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Revision History

DATE	REVISED BY	CHANGES
12/08/2003	Roger Allbee	Version 1 – Original
08/05/2004	Roger Allbee	Version 2 – Added Core Manager driven process
12/14/2005	Roger Allbee	Version 3 – Added Purchaser’s Last Name field Added Site-specific Short Contributing Center Name field Modified Center Number to Customer Account Number
12/14/2005	Roger Allbee	Version 4 – Modified Description of Primary Comments & Secondary Comments
04/03/2006	Roger Allbee	Version 5 – Modified Description of Short Contributing Center Name



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Introduction

This document is intended to describe the design of the Core Ordering & Reporting Enterprise System's (C.O.R.E.S.) Order Upload process.

This process will allow a Service-oriented Core to produce an electronic file of order transactions from a system external to the C.O.R.E.S., for a given month, and have those transactions processed through the C.O.R.E.S. This will result in customer's being invoiced with the information in the same manner in which they are currently accustomed.

This functionality will be utilized to process an order file provided, in a static format, by an individual core. This process is intended to accomplish the following:

1. Utilize a ColdFusion custom process to read externally generated order data from a properly formatted, comma separated value (CSV) file,
2. Upload the data into the C.O.R.E.S. database,
3. Validate the uploaded data's consistency,
4. Supplement the required data not provided in the order upload file, where available, and
5. Produce error reports indicating issues with the data in the file

The benefits of utilizing this process are:

1. Speed/Reduced Effort – Users will not have to manually enter these orders into the C.O.R.E.S.
2. Accuracy – The uploaded orders will be accurate based on the original entry.
3. Consistency – The uploaded orders will be consistent with other orders that have been entered directly into the C.O.R.E.S.
4. Automatic Payment – The appropriate customer accounts are automatically debited/credited through Finance.



C.O.R.E.S. Order Upload Process

The Order Upload file must be a properly formatted, static CSV file. The CSV file must be delimited with commas. An example record layout has been provided and is described below. A ColdFusion web page will allow a Core Manager or their assistant to select the Order Upload file to be processed. A ColdFusion process will copy the file to the server, validate the data's consistency, insert the data into the C.O.R.E.S. "normalized" Order and Order Item tables, and produce an error/exception report to be sent to the Core Manager, upon the user's request. After the process has completed the CSV file will be archived to a separate directory for historical purposes.

The following is an example of a record format used by the C.O.R.E.S. Order Upload process.

Field Name	Field Type	Required?	Description
Primary Comments	VARCHAR(70)	No	This field is available to further distinguish the transaction. The field will be added to comments column. If no value is to be supplied, two double quotes are required to designate an empty string.
Customer Account Number	CHAR(10)	Yes	This field is the Customer Account Number that the service will be charged against. This field must be defined in C.O.R.E.S. and associated to the Responsible Research Principal Investigator, as defined in the M&D financial system or relevant financial system.
Transaction Date	DATE	Yes	The Transaction Date must be a date from the month previous to the current accounting period. (e.g., If the current accounting month is Dec '03, the transaction date must be between Nov 1, '03 and Nov 30, '03). The date format must be in the format DD-MON-YY (e.g., 30-NOV-03). The transaction date provided will be included in the comments field for future reference.
Service Description	VARCHAR(100)	Yes	This is the description of the Service, as defined in C.O.R.E.S.
Quantity	NUMBER(8,2)	Yes	This is the number of service units provided for the period provided.
Unit	CHAR(20)	Yes	This is the unit of measure for the service provided (e.g., care days, Each, Hour, 100ml, Block, etc.). This field does not necessarily have to be consistent with the Category unit, as defined in C.O.R.E.S.
Price	NUMBER(7,2)	Yes	This is the unit cost for the service provided. This field does not necessarily have to be consistent with the Category unit price, as defined in C.O.R.E.S.
Service Category	VARCHAR(100)	Yes	This is the Category of the Service, as defined in C.O.R.E.S.
Secondary Comments	VARCHAR(100)	No	This field is available to further distinguish the transaction. The field will be added to comments column. If no value is to be supplied, two double quotes are required to designate an empty string.
PI's Name	VARCHAR(60)	Yes	This field doesn't necessarily have to be the Responsible Research PI. The field will be added to the C.O.R.E.S. Invoice comments column. The format of this field must be Pi's Last Name, a comma, First Name, a space, and Middle Initial. The Pi's Name must be enclosed in double quotes. (see example below).
Purchaser's Last Name	VARCHAR(40)	No	This field is intended to record the last name of the individual requesting the order.



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C.O.R.E.S. Order Upload Process

Short Contributing Center Name	VARCHAR(8)	No	This field is intended to record the short contributing center name (or Abbreviation), which in turn is used to determine the unit pricing of the item. If no value is to be supplied, two double quotes are required to designate an empty string.
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The Order Upload file must contain a header that defines the columns being provided. Each record in the Order Upload file will become an order in the C.O.R.E.S. If either the quantity or the price is a negative value, the transaction will be entered as a Refund (or Credit) into the C.O.R.E.S. Below is an example of the record format, including the header definitions.

If the Short Contributing Center Name is provided, is valid and meets the Co-Pay criteria, the unit price of the item will be determined by using the C.O.R.E.S. Item Pricing instead of the Price field provided in the file. If the Co-Pay criteria are not met, the unit pricing will revert to the Price field provided in the file.

Comment1,Center Number,Service Provided Date,Description,# Days,Unit,Unit Price,Category,Comment2,PI Name
MCN-DOGS,1047039311,1-Nov-03,Dog,79,care days,17.18,Dog,M/02/346,"Abumrad, Naji N"
MRBII-MICE,4043331891,1-Nov-03,Mouse Sm Cage,62,care days,0.65,Mouse,M/01/164,"Anderson, Mark E"

The comment field, described previously, will be a concatenation of the previously mentioned fields, as follows:

1. Transaction Month (e.g., November), followed by a colon and a space “: ”
2. Primary Comments (e.g., MRBII-MICE) , followed by a space, dash, and another space “ – “
3. Secondary Comments (e.g., M/97/518), followed by “ for “
4. PI’s First Name (e.g., Marie-Claire), followed by a space
5. PI’s Last Name (e.g., Orgebin-Crist)
- 6.

A resultant comment would look something like:

November: MRBII-MICE - M/97/518 for Marie-Claire Orgebin-Crist

The following are required steps for setting up a Core for the C.O.R.E.S. Order Upload process.

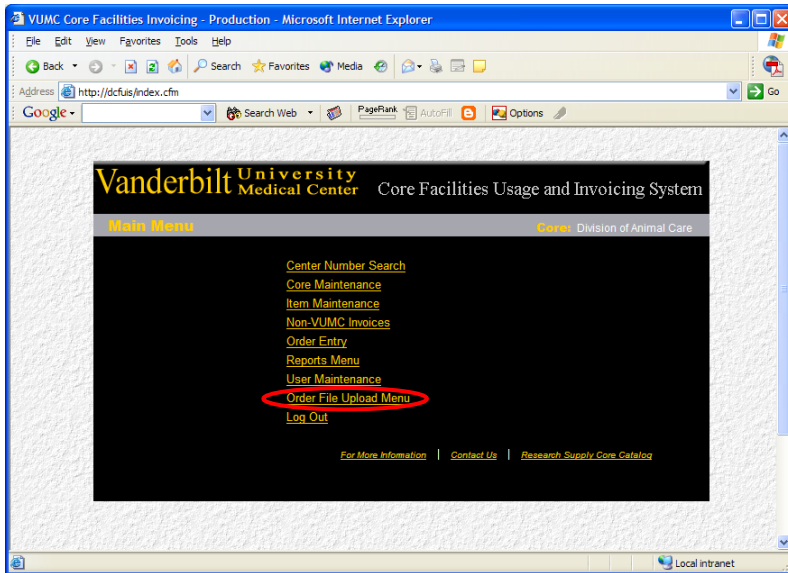
1. If the Core has not already been setup in C.O.R.E.S., provide the Office of Research an email request to set up the new core in the C.O.R.E.S. system. This request should include the Core Name, Core Address, Core Manager Name, and Core’s Customer Account Number
2. The Office of Research will provide this document to the Core Manager or designee.
3. The Core Manager is then responsible for providing the Service Category, Description, Unit, and Unit Price information, in electronic form, for each item provided by the core, as described previously. In addition, a Sample Order Upload file, in the previously described format, will be required.
4. The Office of Research will analyze and test the Sample Order Upload file. Any discrepancies with the Sample Order Upload file will be relayed to the Core Manager for resolution. The Core Manager is responsible for the resolving the discrepancies and providing another Sample file.
5. The Office of Research and the Core Manager will work out any timing issues related to when a file will be available and when the file will be uploaded.
6. After the Sample file(s) have been successfully tested, a date will be set for implementation into Production.



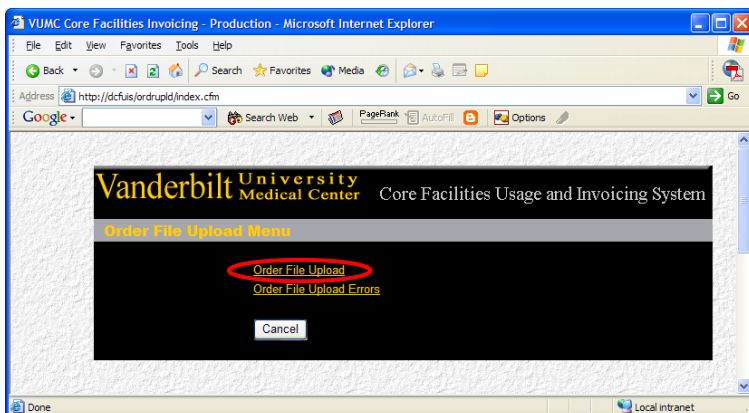
C.O.R.E.S. Core Manager-driven Order Upload Process

This section will illustrate the features of the Order Upload process. This process is only available to Core Managers that have requested this functionality and have gone through the setup as documented previously.

The Core Manager or their assistant will login to Core Facilities and select the Order File Upload Menu option.

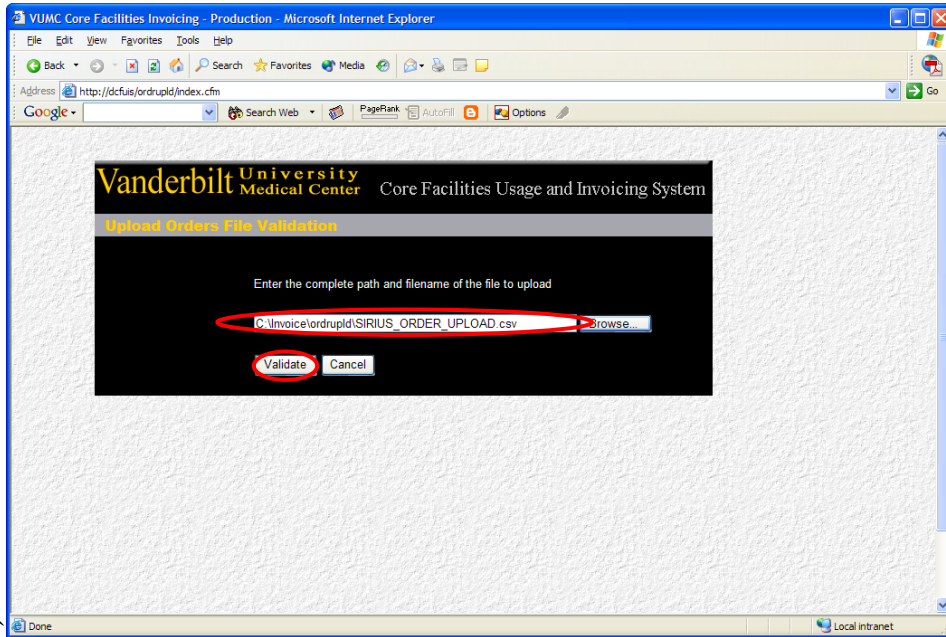


The Order File Upload Menu allows the Core Manager to run the Order File Upload process and view the errors from the last Order File Upload process. Select Order File Upload to run the Order File Upload process.

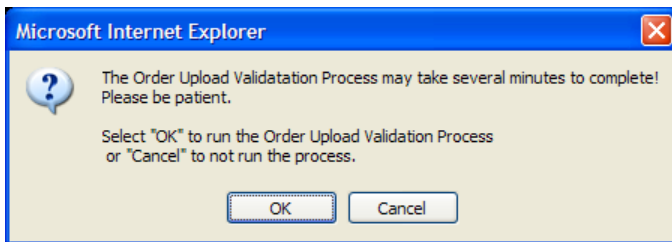




The Core Manager will enter (or browse for) the complete path and filename of the file they wish to upload and select the Validate button.

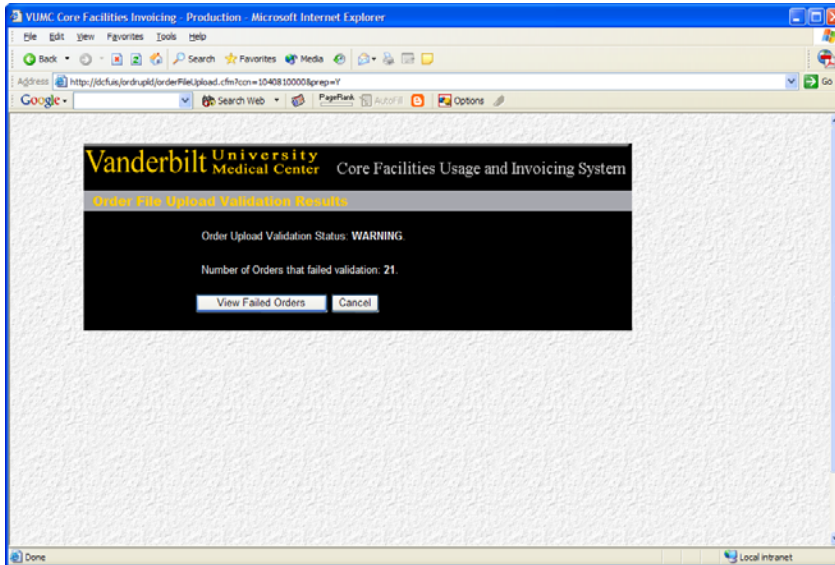


The following message will display; click OK to continue the Validation Process or Cancel.



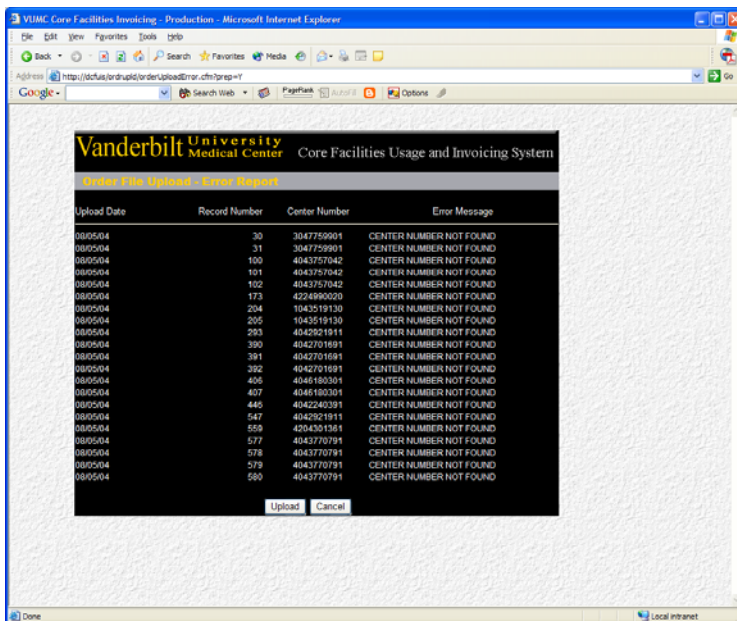


The Order Upload Validation process may take several minutes. The following web page will display when the validation is complete. The results of this validation indicate that there are 21 orders, which failed validation. These orders will not upload, if the process continues. The Core Manager can view the failed Orders and choose to enter these orders manually or correct the orders as appropriate.



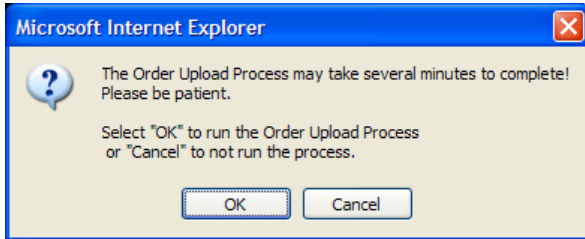
Select View Failed Orders to continue the Order Upload process. The report will display the date the upload process ran, the record number in the file that failed, the Customer Account Number of that record, and an error message indicating why the record failed to upload.

Assuming the Core Manager wishes to continue the upload process, he/she will select the Upload button. If the Core Manager selects Cancel, the file will not upload and he/she will need to correct the failure(s) and rerun the process from the beginning.

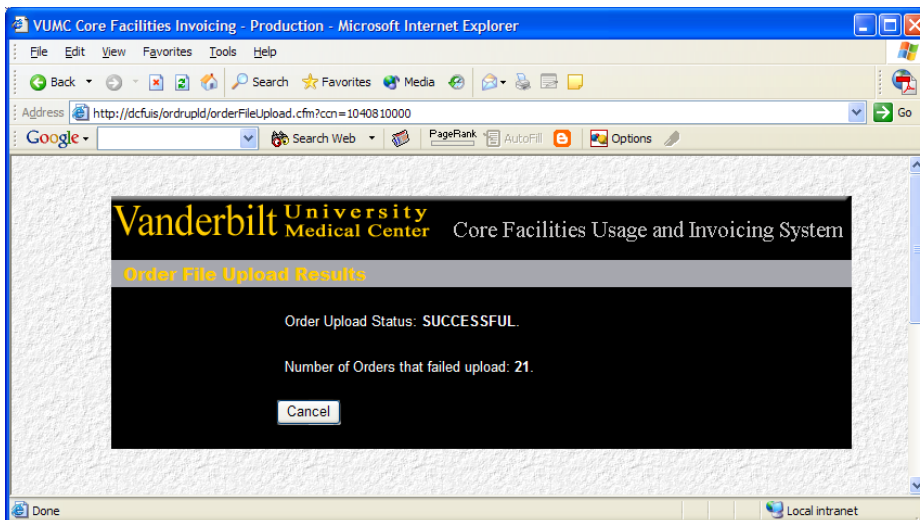




To continue the Upload process, select Upload and OK on the message window.



When the Order Upload process is complete, the following web page is displayed. An email message containing an attached spreadsheet is sent to the Core Manager. The attached spreadsheet will contain the warnings and errors found during the upload process. At this point, all errors will need to be rectified manually.





The following are the C.O.R.E.S. table layouts for the Order and Order Item tables. The Field Value column defines how the values will be generated.

Invoice Order Table

C.O.R.E.S. Name (target)	Null?	Type	Description	Field Value
ORDER_NBR	NO	NUMBER(28.3)	System-generated key using the Oracle Sequence object (ORDR_NBR_SEQ)	C.O.R.E.S. System generated. Each record in the Order Upload file will become an order in the C.O.R.E.S. system
CORE_NBR	NO	NUMBER(3)	System-generated key using the Oracle Sequence object (CORE_NBR_SEQ)	This is table driven based on the Core's Customer Account Number, which is passed as an argument in the URL during execution of the Order Upload process.
CUST_ID		CHAR(10)	This field will allow for the entry of the customer's ID for reference back to the User Security Table	C.O.R.E.S. Customer User table, based on the Customer Account Number(s) from the Order Upload file
SHORT_DESC		VARCHAR2(60)		C.O.R.E.S. Customer User table, based on the Customer Account Number(s) from the Order Upload file
DEPT_TYPE_CD		CHAR(8)	This field will allow for the entry of the customer's department for reporting purposes	C.O.R.E.S. User Security table, based on the Customer Account Number(s) from the Order Upload file
CENTER_NBR		CHAR(30)	This field will allow for the entry of the unique number assigned to a grant based on the Principal Investigator. This is the number against which a Core can charge.	The actual Customer Account Number(s) from the Order Upload file. These Customer Account Numbers must be defined in the C.O.R.E.S. System.
NONVUMC_CUSTOMER_ID		NUMBER(28)	This field will allow for the entry of the number assigned to a Non-VUMC Customer ID.	NULL. Currently no Non-VUMC transactions will be processed.
TRANSACTION_DT	NO	DATE	This field will allow for the entry of the date of the order transaction.	This date will be derived, based on the Transaction Date passed in the Order Upload file
TRANSACTION_TYPE_IND	NO	CHAR(1)	This field will allow for the entry of the type of transaction (i.e., 'D' for Sale/Debit or 'C' for Refund/Credit).	This value will be derived. If either the quantity or the price is a negative value the transaction type will be 'C', otherwise 'D'
SRVC_DT	NO	DATE	This field will allow for the entry of the date that the service was provided.	The Service Date will be the Transaction Date from the Order Upload file
INVOICE_NBR		NUMBER(9)	This field will allow for the entry of the invoice number, once the order is consolidated. This field will be populated by the application.	C.O.R.E.S. System Generated
INVOICE_DT		DATE	This field will allow for the entry of the invoice date, once the order is consolidated. This field will be populated by the application.	C.O.R.E.S. System Generated
INVOICE_STATUS_IND	NO	CHAR(1)	This field will allow for the entry of the status of the invoice (i.e., 'A' for Accepted, 'R' for Rejected, 'E' for Expired or 'U' for Unprocessed). This field will be populated by the application.	C.O.R.E.S. System Generated
PURCHASER_LAST_NAME		VARCHAR2(40)	This field will allow for the entry of any comments for the order.	Concatenation of fields from the Order Upload file, as described previously
COMMENTS		VARCHAR2(256)	This field will allow for the entry of any comments for the order.	Concatenation of fields from the Order Upload file, as described previously



Order Item Table

C.O.R.E.S. Name	Null?	Type	Description	Field Value
ORDER_NBR	NO	NUMBER(28,3)	System-generated key using the Oracle Sequence object 'ORDR_NBR_SEQ'	C.O.R.E.S. System generated (Foreign key)
ORDER_ITEM_NBR	NO	NUMBER(6)	System-generated key using the Oracle Sequence object 'ORDR_ITEM_NBR_SEQ'	C.O.R.E.S. System generated.
ITEM_SEQ_NBR		NUMBER(28)	System-generated key using the Oracle Sequence object 'ITEM_NBR_SEQ'	Hard-coded as 0
ITEM_UNIT_SEQ_NBR		NUMBER(28)	System-generated key using the Oracle Sequence object 'ITEM_UNIT_NBR_SEQ'	Hard-coded as 0
CUST_TYPE_CD		CHAR(8)	This field will allow for the entry of the customer type for the item at the time of the order.	Hard-coded as "VUMC"
ITEM_CATEGORY		VARCHAR2(100)	This field will allow for the entry of the category for the item at the time of the order. (Service Core only)	This is the Service Category value from the Order Upload File
ITEM_NBR		VARCHAR2(128)	This field will allow for the entry of Product Core specific unique values to identify all items. These values will either be derived from the barcode or defined by the Core Manager. All logic used to derive item numbers from the barcode will be hard-coded within the application source code, rather than being table driven. (Product Core only)	NULL
ITEM_DESC	NO	VARCHAR2(100)	This field will allow for the entry of the category description for the item at the time of the order.	This is the Service Description value from the Order Upload File
QTY	NO	NUMBER(6,2)	This field will allow for the entry of the number of the items sold at the time of the order. The default is 1.	This is the Quantity value from the Order Upload File
UNIT	NO	CHAR(20)	This field will allow for the entry of the number of units of the item at the time of the order.	This is the Unit value from the Order Upload File
UNIT_PRICE	NO	NUMBER(7,2)	This field will allow for the entry of the unit price for the item at the time of the order.	This is the Price value from the Order Upload File