Procedures for the Use of *NUcore*, the Northwestern University Shared Facilities Transaction Processing System

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Table of Contents
I. Introduction
II. Pre-requisites and processes for NUcore enrollment
III. Processing errors and recording transactions
IV. Business practices – monthly reconciliation
V. Business practices – fiscal year end

I. Introduction

NUcore is a transaction processing system that permits shared facilities to accept and track orders, and to bill for their services. NUcore was developed as a joint venture of the Feinberg School of Medicine (FSM) Research Office, the Northwestern University Office for Research (NU OR), and the Robert H. Lurie Comprehensive Cancer Center (RHLCCC).

To facilitate the billing function, NUcore uses a data upload model that by-passes some of the review that occurs with other data entry methods. Thus, additional safeguards have been implemented. Some of these safeguards are enforced by the NUcore application, while others exist primarily as policies. This guide describes the policies and procedures that must be adhered to when using NUcore. These policies are an addendum to, rather than a replacement for, the training and procedures established by the Northwestern University Accounting Services group (http://www.northwestern.edu/financial-operations/controller/accounting-services/).

Questions and Technical Support issues with the NUcore system can be directed to
nucore@northwestern.edu

II. Pre-requisites and processes for NUcore enrollment
1. Introduction and Enrollment

NUcore is available to all shared facilities at Northwestern University. In addition, facilities that receive funding from the FSM Research Office, the NU Office for Research, or the Robert H. Lurie Comprehensive Cancer Center may be *required* to use NUcore. If you are interested in using NUcore, the first step is to contact NUcore support at nucore@northwestern.edu.

Any facility that is interested in NUcore should schedule an overview presentation. This 90 minute introduction covers all aspects of the NUcore system, including the design and goals of the application, types of products that the system handles, workflow, billing, account management and the user experience.

2. Pre-requisites for billing via NUcore

NUcore allows shared facilities to accept orders and to bill for services provided. Although NUcore tracks billables, NUcore is not an accounting system and it does not in any way substitute for NU Financials as the primary source of data for accounting purposes.

There are several prerequisites for using the billing functions in NUcore, listed below.

i.   Established recharge chartstring
Shared facility revenue must be deposited to an approved recharge account (fund 160) ; a facility may have more than one such chartstring. The default revenue account for a recharge chartstring in NUcore is 50617 (RDX Sale Tech Services), but a different account may be substituted by the core director as long as the revenue code appropriately reflects the expense activity. Recharge accounts must be approved both by the NU Office of Cost Studies and the department or center that will own the account. Contact your department administrator for more information or to set up a recharge account.

ii.   Approved recharge rates
Rates charged by core facilities must be approved annually by the Office of Cost Studies. This requirement is independent of whether the facility uses NUcore, however NUcore will enforce this rule and the Office of Cost Studies performs random audits of rates in NUcore. If a facility's rates are allowed to expire, NUcore will continue to process orders for that facility but will not allow any charges to be journaled against NU Financials. The contact person for questions regarding recharge rates is Sophia Gabay (s-gabay@northwestern.edu). Additional information can be found at http://www.northwestern.edu/coststudies/recharge.html.

iii.   Permission to send journal transactions from NUcore

NUcore transmits journal entries to NU Financials (i.e. bills its users) using XML-formatted data files. Although this process is transparent to the staff of the shared facility, the facility must receive explicit

4

permission from Accounting Services before they can transmit XML-based journal entries from NUcore.

A shared facility may apply for permission to upload XML-based journal transactions using the *NUcore Journal Upload Registration Form*. This form can be downloaded at:

http://sites.northwestern.edu/nucore/core-forms/nucore-journal-upload-form/

Note that there also exists a spreadsheet-based method for uploading journal transactions, but the two processes are managed separately by Accounting Services and permission for spreadsheet uploads does not imply permission for XML uploads.

To allow transactions from NUcore to be associated with a specific shared facility during and after submission, each facility is assigned a unique identifier called a 'CoreID.' The CoreID is automatically assigned by NUcore and can be viewed by the facility administrator on the *Admin-Overview* page. The NUcore support staff and Accounting Services together maintain a list of CoreIDs and associated contact information. The shared facility does not need to use the CoreID at any point; NUcore will automatically assign the correct CoreID to journals created by that core. However, transactions in NU Financials will include the CoreID as a specific identifier of the facility that submitted the charge and this ID will be visible to administrators in various financial reports.

The contact person for information on the use of CoreIDs is David Ackermann in Accounting Services (d-ackermann@northwestern.edu).

3. NUcore Training

NUcore training is provided by a dedicated support team (nucore@northwestern.edu) and occurs in several parts. Initially, the facility administrator will have scheduled the introductory session, described in section II.1. If a facility chooses to proceed after the overview, NUcore Support will create an empty core on a training system. The training system contains a copy of NUcore which is identical to the one on the production system but with no active connection to the NU Financials system, and with e-mail notification disabled.

Please note that NUcore training neither includes nor replaces the training provided by Accounting Services in the management of university accounts.

i.   NUcore training part 1: Administrative functions

Part 1 is attended by the facility administrator (core director), the facility manager, the business administrator and other staff as desired. This 60 minute, hands-on session covers the basic administrative management of a shared facility in NUcore. The facility administrator will log into the

training system and define the initial parameters for the core. These parameters, which can be edited later, include:

- Facility name and acronym or abbreviation
- Facility descriptions
- Contact information
- Recharge chartstring(s)
- Custom user groups
- Custom order statuses

-See Appendix A for example-

The administrator will create user accounts for facility and business staff and assign appropriate roles from the following options:

- Facility Director
- Facility Administrator
- Facility Senior Staff
- Facility Staff

-See Appendix A for example-

Part 1 of training also covers specific compliance-related functions that are built into NUcore. These include:

- Chartstring validation: NUcore validates chartstrings using guidelines (currently v9) provided by FFRA. Chartstrings are validated when they are first entered into the system as payment sources, at the point of purchase, and again when a journal is created. These checks greatly reduce the number of journal entries that fail after submission to NU Financials.
- Appropriate Fund Codes: By default, NUcore will preclude the use of certain account types, specified by Accounting Services, which should rarely (if ever) be used for purchasing of core services (e.g. payroll accounts). NUcore also maintains a list of specific chartstrings that are exceptions to this rule.
- Expense account code: NUcore requires that the expense account code assigned to an individual product is open on the selected payment chartstring before that product can be purchased. When creating a product in NUcore, the default expense account code is 75340 (Laboratory Services), but a different account code may be substituted by the facility administrator as long as the account code appropriately reflects the expense activity.

ii.   NUcore training part 2: Product catalog creation

Part 2 is attended by the facility administrator and facility manager. This 90 minute, hands-on session covers all aspects of creating the product catalog. The facility administrator will log into the training system and create, as appropriate, one each of the main product types available in NUcore:

- Item
- Service
- Instrument
- Bundle

-See Appendix B for example-

In addition to product-specific items (e.g. scheduling rules for instruments, order forms for services), the administrator will define for each product:

- the recharge chartstring to which revenue should be directed
- the expense account that must be open on the payment chartstring for the purchase of this product
- an approved user list, if appropriate
- pricing, consistent with a review by the Office of Cost Studies

-See Appendix B for example-

iii.   NUcore training part 3: XML upload training

Part 3 of training is provided by the Accounting Services group and covers issues and policies related to XML upload of journal transactions. The contact person for this training is Elizabeth Gladic, Accounting Services (e-gladic@northwestern.edu).

- Training for New Spreadsheet Users
  - Creating Journal Spreadsheets
- Training for Current & New NUcore Users
  - Brief Overview of NUcore Upload Process from Accounting Services Perspective
  - Overview of difference between Journal Spreadsheet Process and the XML Upload Process, and explanation of NUcore identifier / Mask vs. Source
  - Journal Look-up via the NU Portal
  - Reconciling Journals on GL008 Budget Statements
  - Processing & Troubleshooting Journal Posting Issues/Errors
- General Information
  - Monthly Closing Calendar
  - Chart String Construction Rules
  - 90-day Policy for Journal Entries

iv.   NUcore training part 4: User training

After the Introduction and parts 1 and 2 of the NUcore training, additional training is provided on as-needed basis. The contact for training is nucore@northwestern.edu.

4. Additional training
Business administrators in the Departments and Centers that hold core recharge accounts may require other relevant training. This training is independent of NUcore and can be found at the following sites:

http://www.it.northwestern.edu/admin-systems/training/financial/index.html

III. Processing errors and recording transactions

Transactions transmitted from NUcore to the NU Financials system are processed in multiple steps. Although the systems have been carefully designed to minimize failed transactions, these will inevitably occur. This section provides details of the data process and describes the proper handling of successful and unsuccessful transactions.

1. NUcore operations

If the entire NUcore system goes offline, contact:

NUcore Technical Support Team
nucore@northwestern.edu

2. XML upload processes

After 4:45 PM each day, NUcore creates a single encrypted XML file containing all items sent for journaling during that day. Although this file contains transactions from multiple cores, within the file there is one journal per core, and that journal contains all of that core's transactions. This file is transferred to a server managed by FFRA.

As part of the ensuing *'XML upload file import process',* this XML file is delivered to the NU Financials production batch server. An automated process examines the contents to ensure that the journals are in balance and that all the chart string components are valid and active. If the XML upload file passes this step (i.e. if it is successfully imported), the file is handed off to the *'journal generate process'* (the second step in getting the data into NU Financials).

When the file import process concludes, successfully or unsuccessfully, the system automatically sends an e-mail containing two attachments. One of the attachments is an error file (which can be empty or blank if there are no errors) and one of the attachments is a confirmation file (containing information about what was processed). All e-mails are directed to:

NUcore Technical Support Team
nucore@northwestern.edu

If the files indicate that a journal has failed to be imported, a NUcore Support Technician will notify the core director and/or business administrator. The journal should be marked as '*Failed*' in NUcore, which will return the items from that journal to the pool of items available to be journaled.

3. Journal generation

Journals that successfully reach the *journal generate process* are loaded into NU Financials. Once each journal has entered NU Financials, any line items that fail to post must be corrected or deleted in NU Financials before the journal can be processed.

If an item fails to post, it will come to the attention of Elizabeth Gladic (e-gladic@northwestern.edu), Supervisor for Transaction Processing. The description field for the item, which is viewable by the accounting staff, contains the CoreID for the originating core. Accounting services has a list of contacts

9

for each CoreID (see section II.2.iii). The description field also shows the NUcore order number for that item. The order number is unique, allowing the core director to identify the relevant NUcore transaction. Elizabeth or a member of the Transaction Services Team will contact the relevant core director or business administrator.

Items that fail to post in NU Financials must be corrected or deleted by the core director or business administrator in NU Financials before the end of the current accounting period (see NUFinancials Closing Schedule). After this time, Accounting Services will clear unresolved items from NU Financials.

4. Recording journals in NUcore

There is no electronic return of data from NU Financials to NUcore. The core director or business administrator must check NU Financials beginning the day after a journal is submitted to determine the outcome. This process is the same as for items posted to NU Financials using the portal or the upload spreadsheets, and is independent of NUcore.

If the entire journal has posted without exceptions, the journal should be marked as '*Succeeded, no errors*' in NUcore. If one or more line items fails to post, the journal should be marked as '*Succeeded, with errors*' in NUcore. The core director or business administrator will then work with Accounting Services to correct or delete the failed line item(s) in NU Financials. If a correction is made that involves changes to the amount or source of payment, the corresponding line item in the pending journal in NUcore should be edited to reflect the change(s). If the item is deleted in NU Financials, it should be deleted from the pending journal in NUcore. Once the failed items are corrected or deleted and the journal posts in NU Financials, the remainder of the journal items should be marked as '*Reconciled*' in NUcore. Items deleted from a pending journal in NUcore return to the list of items that can be journaled later.

IV. <u>Business practices – monthly reconciliation</u>
NUcore is not an accounting system and is not the primary source of data for monthly accounting activities. However, there are specific Accounting Services policies that are relevant to use of the NUcore system. Policies and activities that should be considered on a monthly basis are listed below.
1. Monthly NUcore-related activities
- Identify and correct transactions that have failed to post in NU Financials.
- Review the date of delivery for items that are marked *Complete* in NUcore but which have not yet been journaled. Identify items that are approaching the 90 day limit for journaling. NUcore will mark in RED any item that was marked as complete more than 60 days ago but which has not yet been journaled.
- The *Completion* date noted in NUcore will match the accounting date in the submission process to NU Financials. In order to post transactions to the accounting period that matches the *Completion* date month, items should be submitted with a journal date prior to the end of that accounting period. NUcore restricts the available journal dates based on the closing schedule published by Accounting Services.

2. Policy issues
- All items must be journaled within 90 days of the date of delivery. In NUcore, service delivery is defined as the date when the status of an order is moved to *Complete*. (Note - a 90 day memo must be prepared and signed by the appropriate staff should any items be journaled beyond 90 days.)
- Business administrators and/or core directors are responsible for checking that journals have posted correctly in NU Financials, and that they are properly recorded in NUcore. Items that fail to post in NU Financials must be corrected in a timely fashion. Items that fail to post in NU Financials and are not corrected <u>by the end of the accounting period for journal submissions</u> (see calendar) will be deleted.
- COGNOS reports (e.g. GL005, GL008) can be reconciled with NUcore activity via the NUcore order numbers. The NUcore order number will appear in the description field of each line item in the COGNOS reports. NUcore activity can be reviewed interactively or with a summary report.

3. Troubleshooting
- To avoid double billing of transactions in NUcore, items that have been journaled are held in a pending status. If the journal is marked as *Successful*, the items are credited in NUcore and removed from the NUcore billing system. If items are deleted from the pending journal before it is marked as successful, the deleted items return to the pool of items that can be journaled.
- If a journal is incorrectly marked as failed, items could be inappropriately journaled a second time. Although NUcore will only mark each item as collected once, NU Financials will have been billed twice. In this case, the correction must be made to NU Financials.
- The correct process for a journal that is incorrectly marked as failed in NUcore is to contact a system administrator. Only a system administrator (and not a core director or business administrator) can mark items as *Successful* in NUcore without re-transmitting the journal entries to NU Financials.
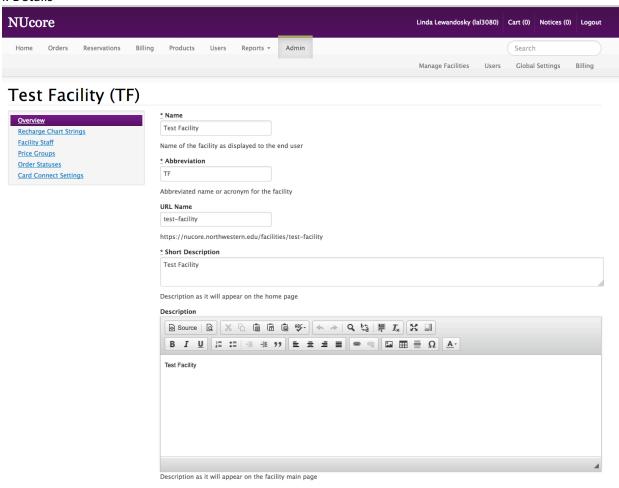
V. Business Practices - fiscal year end

NUcore does not operate on a fiscal year basis and NUcore is not the primary source of data for year-end accounting. All year-end accounting is done using data from NU Financials. However, NUcore purchases should be marked as *Complete* and journaled in a timely manner, especially near the fiscal year-end. NUcore will automatically assign a journal to the fiscal year in which its items were marked as complete. NUcore will not allow items from two fiscal years to be mixed in one journal.

Similar to the monthly activities, all current fiscal year transactions that have failed to post in NU Financials must be corrected by the year-end cut-off dates indicated by Accounting Services. Business administrators and/or core directors are responsible for checking that journals have posted correctly in NU Financials, and that they are properly recorded in NUcore.
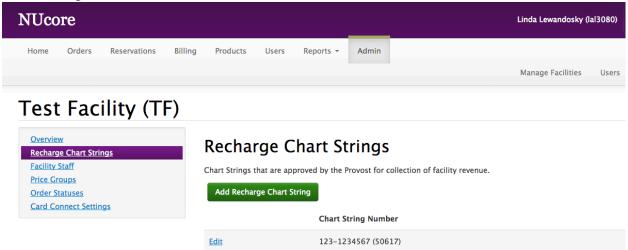
Elizabeth Gladic (e-gladic@northwestern.edu) and the Transaction Services Team are the primary contacts for related fiscal year end journal activities.

Appendix A. Administrative setup

i. Details

ii. Chartstring

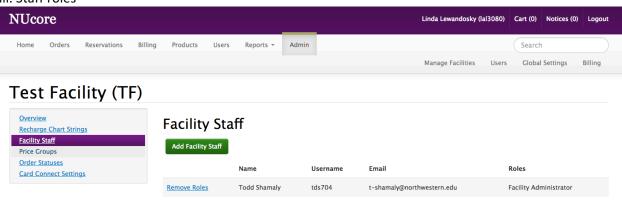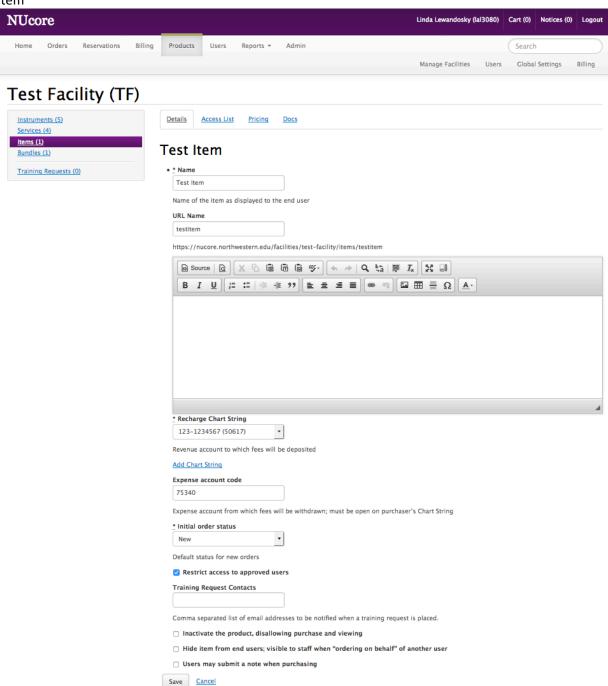## iii. Staff roles

Appendix B. Product Catalog setup

    i.   Item

ii. Instrument