Application Programming Support (APS) Procedures and Practices  
Effective 6/19/2014

1. APS Responsibility Matrix

**APS Functional Technicians**
Banner HR and Payroll – Andre Schutte  
Banner Advancement - Dylan Hall  
Banner Finance – Carol Nicolls  
Banner Admissions and Records – Susan Breeding (for the time being)  
Banner Financial Aid – James Hydusik and/or Aaron Overall  
Workflow issues – Andre Schutte  
DegreeWorks issues – Andre Schutte  
Raiser’s Edge - Dylan Hall

**APS Analysts**
Banner Finance and Student Accounts Receivable – Sheryldine Bates  
Banner Advancement – James Ayers  
Banner HR and Payroll – Susan Breeding  
Banner Student – Pat Ehrensing / Dean Copple  
Banner Financial Aid – Sharon Giles  
Workflow security – James Ayers  
DegreeWorks security – Pat Ehrensing  
UC4 – Sharon Giles  
BDMS security – James Ayers  
Luminis issues – Susan Breeding  
Eprint security – James Ayers  
Argos security – James Ayers  
Touchnet issues – Sheryldine Bates  
IntelleCheck – Sheryldine Bates - Security, connection and check printing issues  
FormFusion - Sheryldine Bates - Security, connection and forms printing issues  
SciQuest/PelliBiz – Sheryldine Bates - Banner connection and troubleshooting with Networking and Technical Services  
Xenegrade/XenDirect/Business and Community Services(BCS) - Sheryldine Bates - Interface(feeds) between Xenegrade/XenDirect and Finance  
Spreadsheet Budgeting - Sheryldine Bates - Finance and Payroll
Web Tailor – All analysts
Banner security – All analysts
Runner National Change of Address processing - Susan Breeding
2. If a change to an Oracle table must be made, it should be made by the appropriate user using a standard Banner screen or UC4 process if at all possible (see below for special duplicate PIDM processing). If the data can only be corrected through ad-hoc SQL commands. The following procedure should be used:

a) The request to change data must come from the appropriate Data Owner or a person designated by the Data Owner of the data. Data Owners are listed on the Application Programming Support Security Request Form. All requests to modify data MUST be made via e-mail or in writing from the data owner to the appropriate APS Analyst.

b) The APS Analyst will prepare SQL to modify the appropriate Banner table(s) and thoroughly test the SQL in a TEST Banner instance if at all possible. The SQL should be saved in a script file and stored in UNIX in the appropriate sub-directory (/u01/app/sct/banprod/local/xxxxxxx/plus/sql/datachanges where xxxxxx = student, finaid, finance, alumni, humanresources, or payroll)

c) The APS Analyst will update the Excel spreadsheet Banner Change Management Log.xlsx to reflect the date the database was modified, the name of the APS Analyst performing the modification, the user who requested the modification, a brief summary of the modification, and the location of the script file used to perform the database update.

d) The APS Analyst will keep the e-mail or written request indefinitely for audit purposes.

e) In the case of a suspected duplicate PIDM, an e-mail should be sent to PIDM-L@LISTSERV.PSTCC.EDU referencing both P-Numbers to be consolidated. The APS Director will accept responsibility to research the two PIDMs and determine which APS Analyst should be involved in the consolidation process. If multiple departments of the college are affected, multiple APS Analysts may be asked to participate in the data consolidation. The APS Director will coordinate the project until it is completed. Each APS Analyst should complete steps (b) – (d) above for this consolidation.
3. If a change is requested to an Argos data block or report, the request should be made by e-mail or in writing and the following versioning procedures should be used by all APS personnel:

a) Copy the data block from the appropriate department or user folder to the APS person’s personal folder.

b) Create a new version of this same data block and increase the version number. If the changes to be made are minor, the sub-version can be changed (for example, Version 1.1 upgraded to Version 1.2). If the changes are major, the version number should be changed (for example, Version 1.1 upgraded to Version 2.0). All reports under the data block should be upgraded to the same version number of the data block so Argos users can identify what version of a data block generated a specific report.

c) A Note should be added to the new version of the data block. This note should show the Version number, date, and APS employee making the change in the title of the note. In the body of the note, a brief description of the modifications being made should be entered.

d) When the changes have been completed and the requestor has completed testing the modification, the new version of the data block should be copied back to the original department/user folder and the original version of the data block should be deleted from the department/user folder.

e) If more than three versions of a data block exist in an APS employee’s personal folder, the oldest ones can be deleted.

f) If the user determines at a later time that the previous version of a data block should be restored, the previous version of the data block should be copied back to the original department/user folder and the incorrect version should be deleted. If the author of the most recent changes is available, he/she should do this. If the author of the most recent change is not available, any APS employee can make this reversal, but it is that person’s responsibility to keep the author of the most recent change informed of what has happened.

g) The APS employee should retain the e-mail or written change request indefinitely for audit purposes.
4. If a change is requested to a script, the request should be made by e-mail or in writing and the following versioning procedures should be used by APS analysts:

a) Make a backup copy of the script before beginning any changes. The backup copy should reside in the same sub-directory as the original and should have the suffix BACKUP_YYYYMMDD added to the script name.

b) A comment should be added to the beginning of the script. This comment should include the Version number, date, and APS analyst making the change and a brief description of the modifications being made.

c) When the changes have been completed, the requestor should thoroughly test and approve the modification.

d) If more than three backup versions of a script exist, the oldest ones can be deleted.

e) If the user determines at a later time that the previous version of a script should be restored, the incorrect version of the script should be renamed and the latest backup version of the script should be renamed back to the original name. If the author of the most recent changes is available, he/she should do this. If the author of the most recent change is not available, any APS analyst can make this reversal, but it is that person’s responsibility to keep the author of the most recent change informed of what has happened.

f) The APS analyst should retain the e-mail or written change request indefinitely for audit purposes.
5. If a change is requested to a Pellissippi developed Oracle function, package or procedure in schema PSCCCUSTOM, the request should be made by e-mail or in writing and the following versioning procedures should be used by APS analysts:

a) Make a backup copy of the function/package/procedure before beginning any changes. The backup copy should reside in the same schema as the original and should have the suffix BACKUP_YYYYMMDD added to the function/package/procedure name.

b) A comment should be added to the beginning of the function/package/procedure. This comment should include the Version number, date, and APS analyst making the change and a brief description of the modifications being made.

c) When the changes have been completed, the requestor should thoroughly test and approve the modification.

d) If more than three backup versions of a function/package/procedure exist, the oldest ones can be deleted.

e) If the user determines at a later time that the previous version of a function/package/procedure should be restored, the incorrect version of the function/package/procedure should be renamed and the latest backup version of the function/package/procedure should be renamed back to the original name. If the author of the most recent changes is available, he/she should do this. If the author of the most recent change is not available, any APS analyst can make this reversal, but it is that person’s responsibility to keep the author of the most recent change informed of what has happened.

f) The APS analyst should retain the e-mail or written change request indefinitely for audit purposes.
6. In general, it is PSCC’s practice to not change standard Ellucian Banner code. If a change is requested to standard Ellucian Banner code, approval for such a change must come from the Vice-President for Information Technology. It is preferable to create a copy of the code and place it in schema PSCCCUSTOM and then use Web Tailor to reference the copied/modified version of the code. If this is not possible, the following versioning procedures should be used by APS analysts:

a) Make a backup copy of the current Ellucian Banner function/package/procedure before beginning any changes. The backup copy should reside in sub-directory /u01/app/sct/banprod/local/xxxxxxx/dbprocs where xxxxxxx = student, finaid, etc. and should have the suffix of BACKUP_YYYYYMMDD as part of the backup name (for example BWSKGRAD_BACKUP_20140314).

b) A comment should be added to the beginning of the function/package/procedure. This comment should include the version number, date, and APS analyst making the change and a brief description of the modifications being made.

c) Code changes should be tracked as follows:

i. If code is added, it should clearly be identified by adding a comment line in front of the added code and again at the end of the added code. The comment line at the beginning of the added code should include the word “Begin Added”, the PSCC version number of the code addition and the name of the analyst making the change. The comment at the end of the added code should include the word “End Added”, the PSCC version number of the code addition and the name of the analyst making the change.

ii. If code is deleted, it should simply be commented out. The “deleted” code should clearly be identified by adding a comment line in front of the “deleted” code and again at the end of the “deleted” code. The comment line at the beginning of the “deleted” code should include the word “Begin Deletion”, the PSCC version number of the code “deletion” and the name of the analyst making the change. The comment at the end of the “deleted” code should include the word “End Deletion”, the PSCC version number of the code “deletion” and the name of the analyst making the change.
iii. If code is modified, the old code should be commented out and a new line of code added. The modified code should clearly be identified by adding a comment line in front of the modified code and again at the end of the modified code. The comment line at the beginning of the “deleted” code should include the word “Begin Change”, the PSCC version number of the code modification and the name of the analyst making the change. The comment at the end of the modified code should include the word “End Change”, the PSCC version number of the code modification and the name of the analyst making the change.

d) When the changes have been completed, the requestor should thoroughly test and approve the modification.

e) A copy of the modified Ellucian Banner function/package/procedure should be made and stored in sub-directory /u01/app/sct/banprod/local/xxxxxxxx/dbprocs. This is in case the code is overwritten accidentally by a Ellucian upgrade/patch. When an upgrade to Banner is done and a full re-compile is needed, NTS will re-load source code from these /u01/app/sct/banprod/local/xxxxxxxx/dbprocs sub-directories.

f) If more than three backup versions of a function/package/procedure exist, the oldest ones can be deleted.

g) If the user determines at a later time that the previous version of a function/package/procedure should be restored, the incorrect version of the function/package/procedure should be renamed and the latest backup version of the function/package/procedure should be renamed back to the original name. If the author of the most recent changes is available, he/she should do this. If the author of the most recent change is not available, any APS analyst can make this reversal, but it is that person’s responsibility to keep the author of the most recent change informed of what has happened.

h) The APS analyst should retain the e-mail or written change request indefinitely for audit purposes.
7. For new users of any PSCC administrative system or if an existing PSCC user’s security needs to be changed, the appropriate data custodian should complete an *Applications Programming Support Security Request Form* found on the APS web site ([http://pstcc15.pstcc.edu/aps/](http://pstcc15.pstcc.edu/aps/)). The appropriate data custodian should complete the appropriate portion of the form in detail. If the new user is to modeled after the security of an existing user, this should be noted in the form. When the form is completed, the data custodian should e-mail the form to the APS listserv (APS-L@LISTSERV.PSTCC.EDU). The appropriate APS analyst will setup the requested security for the new user. If the new user has Banner access to forms/processes in another department’s jurisdiction in addition to the ones authorized by one data custodian (for example, if APS receives a security request from the Student data custodian to copy security from user xxxxxx to user yyyyy and user xxxxxx has access to Banner Finance forms/processes as well as Banner student processes), then APS will be responsible for contacting the secondary data custodian and receiving permission from that data custodian to allow access to the new user). When security access has been setup as requested, APS will inform the user by e-mail that the security change has been completed.

8. Data custodians are encouraged to review Banner security at least annually to ensure that the established security classes and users assigned to those classes are still valid. This can be done using Argos data blocks

   i. Banner Security by Employee
   ii. Banner Security by Form
   iii. Banner Security by Organization/Employee
   iv. Banner Security by Security Class/Objects
   v. Banner Security by Security Class/Users

If changes need to be made to Banner security, the data custodian should contact the appropriate APS analyst.
9. When an employee is terminated from the college either by retirement or otherwise, HR should send a copy of the Pellissippi Employee Exit Checklist to the APS Director. The APS Director will attach a copy of the Pellissippi Employee Exit Checklist Account Deletes Excel spreadsheet and route the form to the appropriate APS Analysts to remove all Banner accounts and 3rd party software accounts as appropriate. In removing Banner access, Banner self-service access will not be removed so the employee can continue to access past pay records, leave balances, etc.

10. Periodically, the APS Director will run an Argos report to identify faculty members who have not taught for a period of terms (normally 3 years or more). Names of faculty members so identified will be sent to the appropriate dean for their approval to remove the person’s faculty credentials in Banner. Removing such credentials will then prohibit the faculty member from accessing Faculty Self-Service Banner functions such as grade reporting and student academic transcripts inquiries.