Banner Technical
Student Technical Training Workbook

Release 8.0 - April 2008

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Introduction

Course goal

This course is designed to provide an overview of the major tables, reports, and processes included in each module of the Student System, as well as providing an introduction to the Banner directory structure and a closer look at some of the database object creation scripts for each of the Student System modules.

This training program will provide the Student technical staff with a basic knowledge of the tables, reports, and processes that makes up the Banner Student System.

The training also includes discussion about data conversion, as well as a conversion example exercise.

Intended audience

Programmers, DBA's, and analysts who may teach others about Banner tables and processes will benefit from the training.

Prerequisites

To complete this course, you should have

- completed OR101 (Introduction to Oracle)
- completed Banner Navigation

Introduction

Introduction

This course is designed to provide an overview of the major tables, reports, and processes included in each module of the Student System, as well as providing an introduction to the Banner directory structure and a closer look at some of the database object creation scripts for each of the Student System modules.

This training program will provide the Student technical staff with a basic knowledge of the tables, reports, and processes that makes up the Banner Student System.

The training also includes discussion about data conversion, as well as a conversion example exercise.

The purpose of this course is to make programmers, analysts, and other technical staff familiar with the tables and other database objects and processes that make up the Student System.

Others areas of interest such as forms modification, advanced database toolkit topics, Object Access, role-based security, etc. are covered completely in other training offered by SunGard Higher Education either at the Ed Center or at the client site.

Student Technical Training Overview

Introduction

Objectives

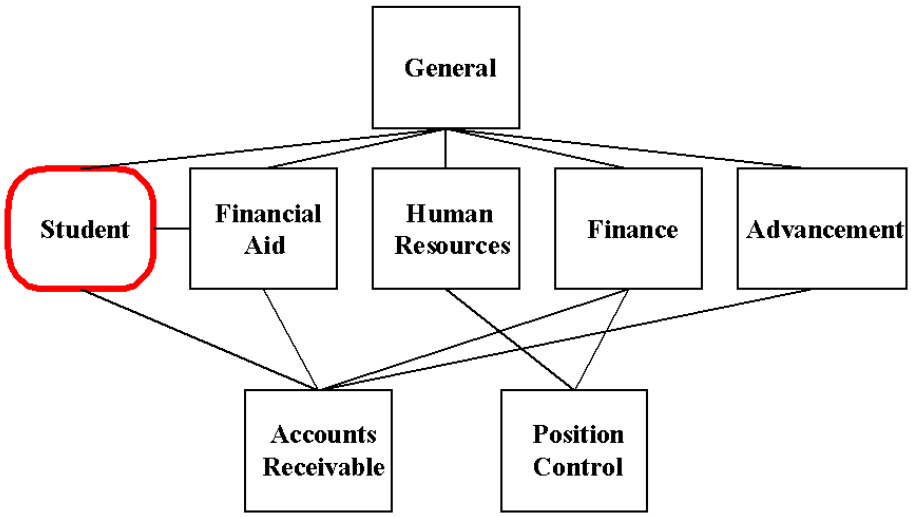
At the end of this section, you will be able to describe many of the basic components of the Banner Student System.

The Student System

Description

The Student System interacts with Finance through General (GURFEED), but also can be considered to have a direct connection to Finance through Accounts Receivable in the Student System.

Diagram



Student and Advancement

Student to Advancement Interface (APPSTDI)

- Adds records that define individuals as constituents, as well as, updates information on existing constituents
- Shared information across Banner
  - Identification, Person & Address Information
  - Information pulled from Student into Advancement
- Academic information is pulled from Admissions, Academic History & Registration
- Student Cooperative information may also be retrieved for employment history
- Student activities will also be retrieved

Student and Finance

Accounts Receivable connects these Systems.

Charges can be posted to an account through the following Student modules:

- Admissions
- Registration
- Location Management
- Academic History
- CAPP

Cashiering sessions would be created for the above transactions.

- TGRFEED/FURFEED - processes to move the AR transactions from AR to Finance

  TGRFEED inserts rows into the GURFEED table. FURFEED reads each row and loads the data into the Finance system

- TSRRFND/FURAPAY - Processes to move AP transactions from AR to Finance

  TSRRFND inserts rows into the GURAPAY table. FURAPAY reads each row and loads data into the Finance system

Disbursements

- TSASPAY - Student Payment form. Users can disburse Financial Aid from this form.

  If automatic disbursement flag on TSACTRL is checked then disbursement is done automatically.

  If flag is unchecked the user can disbursement manually. Manual disbursement is performed by entering a 'Y' in the 'Recalculate Financial Aid?' field on the Financial Aid Recalculation window. An AR transaction will be created if disbursement occurred.

- TSASPAY - Student Payment form. Authorized and memoed Financial Aid will display on the student payment form TSASPAY.

  Authorized Financial Aid can reduce the amount due on this form if the 'Committed/Authorized FA Reduces Amount Due Indicator' on the TSACTRL form is checked. Memos never reduce amount due.

- TSRCBIL - Student Billing Process. Can have authorized FA reduce amount due if flag is set on TSACTRL. Memos can only be printed.

- RPEDISB - allows disbursable aid for a specified term to be credited to a student's account and/or bill in three ways: payments, authorizations and/or memos.

  Students must pass all user-defined edits and any applicable federal requirements.

  Any adjustments made by the Financial Aid office to student awards or due to funds failing disbursement edits may be posted to a student's account and/or bill.

Student and Human Resources

Data entered through either General Person module is shared.

Reports pull information from both the Faculty Load module and the HR system for reports.

- SIRCTAL (Faculty Load Contract Analysis)

  Salary information can be added with a parameter entry.

- PERFACL (Faculty Load Comparison)

  This process identifies where data does not match.

  If the data matches, total and recording of Total Contact Hours and FTE are updated in the HR system.

Shared Student Validation Forms

Field	Table description	Advance-ment	Finance	FinAid	General	HR
STVHONR	Institutional Honors	A				
STVINIT	Initials	A				H
STVLANG	Language					H
STVLEAD	Leadership	A				
STVLEVL	Level			R		
STVLGCY	Legacy	A	F	R		H
STVMAJR	Major, Minor, Concentration	A		R		H
STVMDEQ	Medical Equipment					H
STVMEDI	Medical					H
STVMRCD	Meal Rate			R		
STVMRTL	Marital Status	A	F	R		H
STVMSCD	Meal Assignment Status			R		
STVORIG	Originator	A				
STVPENT	Port of Entry			R		H
STVRATE	Student Fee Assessment Code			R		
STVRDEF	Building/Room Attribute			R		
STVRELG	Religion	A	F	R		H
STVRELT	Relation					H
STVRMST	Room Status			R		
STVRRCD	Room Rate			R		
STVRSTS	Course Registration Status			R		H
STVSBGI	Source/Background Institution	A		R		H
STVSITE	Site			R		
STVSPON	International Student Sponsor			R		
STVSTAT	State	A	F	R		H
STVSTST	Student Status			R		
STVTADM	Test Score Administration Type			R		
STVTELE	Telephone Type	A	F	R		H
STVTEPR	Test Purpose			R		

Field	Table description	Advance-ment	Finance	FinAid	General	HR
STVTERM	Term			R		
STVTESC	Test Code			R		
STVTSRC	Admission Test Score Source			R		
STVVETC	Veteran Type			R		
STVVTYP	Visa Type			R		H
TTVBILL	Billing Code			R		
TTVDCAT	Detail Category			R		
TTVPAYT	Payment Type			R		
TTVSRCE	Charge/Payment Detail Source			R		H

Product Table Owners

Banner views and BANINST1

All Banner views owned by BANINST1:

- General
- General Person
- Finance
- Accounts Receivable
- Position Control
- Payroll
- Student
- Financial Aid
- Advancement
- Security

Banner views

All Banner Views:

- GENERAL
- SATURN
- FIMSMGR
- TAISMGR
- POSNCTL
- PAYROLL
- SATURN
- FAISMGR
- ALUMNI
- BANSECR
- BANINST1

Student System Overview

Diagram

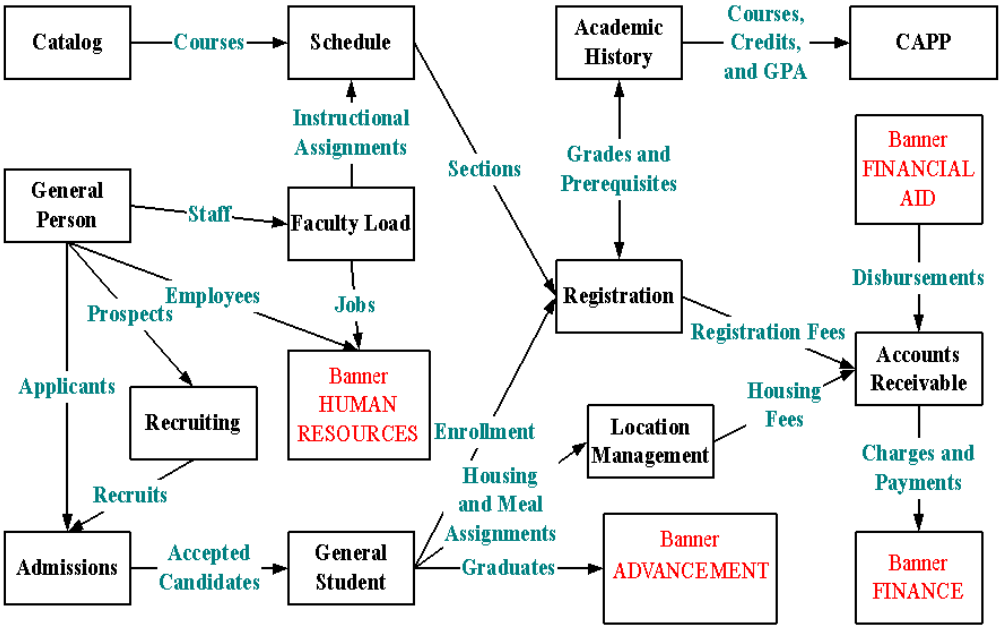


Diagram legend

The overview diagram displays how each module interacts with other parts of the Student System.

The diagram flows left-to-right. This does not necessarily reflect the order for conversion and implementation, but does show the logical order of operation in production.

This presentation will follow the logical conversion/implementation order; conversion and implementation order will be discussed along the way.

Color codes (more easily viewable in the course's PowerPoint)

Black = Major Student Modules

Green = Major Content Area of Modules

Red = Other Banner products, which can complement Student

Recommended Order for Conversion

Recommended order

- Catalog
- General Person
- Recruitment
- Admissions
- Location Management & Housing
- Schedule
- Faculty Load
- General Student
- Accounts Receivable
- Registration
- Academic History
- Curriculum, Advising & Program Planning (CAPP)

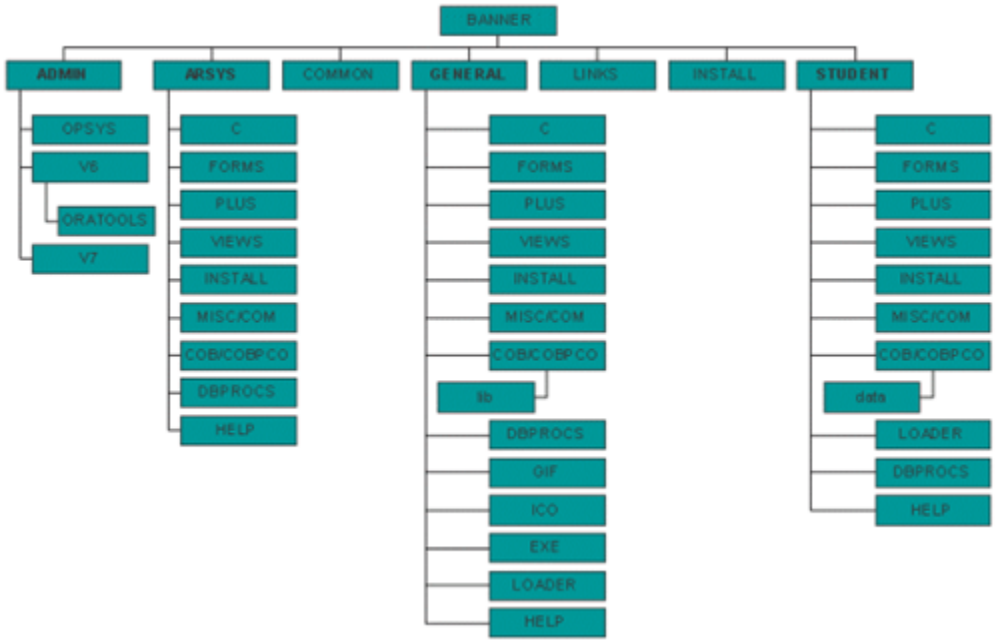
Course overview

This course will take a forms approach, looking first at the major forms in each module, then at the underlying tables that are required for conversion. We will also examine the validation tables required for conversion. Next, we will look at the tables in the database using SQL*Plus and learn their structure and content, and the relationships among tables in a module. We will look carefully at the delivered reports and processes, looking at the code that produces them. Finally, we will look in the Banner Student directories at some of the scripts that produce database objects such as views, functions and procedures.

Your institution may not choose to use every form or every field on any form, but this class will cover the required forms, tables and fields, reports and processes you will need for conversion in order to use the Student System effectively.

Banner Student Directories

Diagram



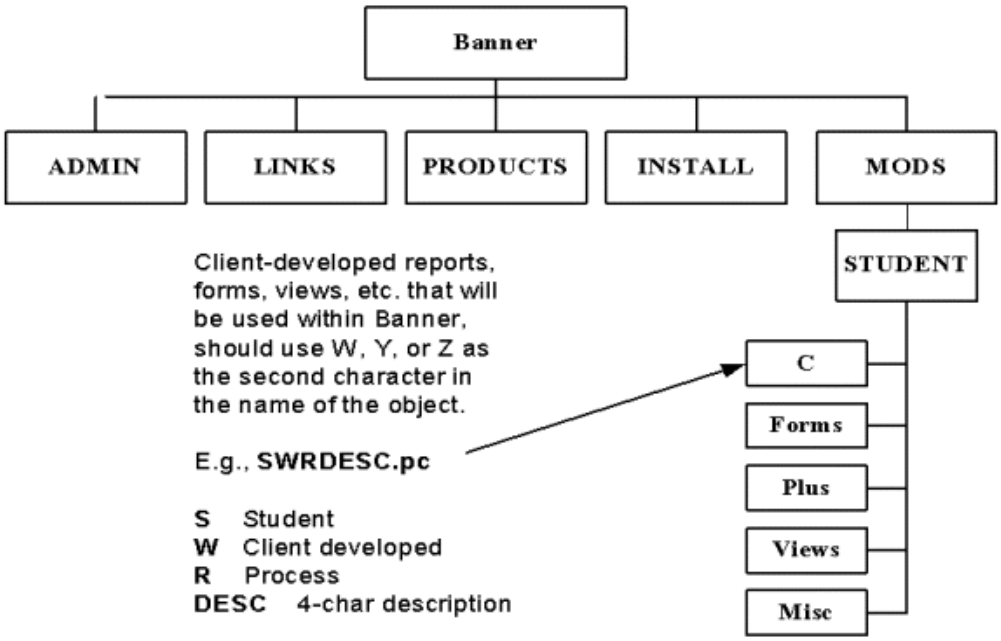
Directories

We will be looking at these directories in your operating system in detail for each module as we move through the class. We will look closely at the C, DBPROCS and VIEWS directories.

- C — Pro*C and C source files
- COB — Pro*COBOL files (UNIX only)
- COBPCO — Pro*COBOL files (VAX/VMS only)
- COM — DCL command files (VAX/VMS only)
- DATA — Course request and scheduler input (directory under COB-UNIX only, or COBPCO, VMS only)
- FORMS — ORACLE*FORMS .fmb, .fmx, .pll, and .lib files
- INSTALL — .SCTDMP file used during initial install
- LOADER — ORACLE SQL*LOADER -- ASCII to Oracle Tables
- MISC — Shell scripts (UNIX only; COM -- DCL command files for VAX/VMS)
- PLUS — SQL*PLUS scripts
- VIEWS — SQL*PLUS scripts to recreate views
- DBPROCS — SQL*PLUS scripts to recreate database procedures, packages, functions, triggers

Directory Structure for Client-Developed Items

Diagram



MODS directory

The MODS directory is a separate directory for client modifications. Within the MODS directory, you would find another STUDENT directory, etc.

Examples of modifications found here include forms, modifications to C programs, client created views, functions, etc.

Review of Database Tools

Brief review

This brief review of database tools will cover the data dictionary, which we will use extensively throughout the training, and a brief review of the principle of referential integrity, an understanding of which is essential to a successful conversion.

There are several good ways to see the contents of the database and learn the structure and content of the tables.

Data Dictionary

Built into Oracle is the Data Dictionary, a series of views that give detailed information about the database. This is covered in more detail in the DBA Toolkit class.

GURPDED process from Job Submission

Banner has provided a form interface to the Data Dictionary with the GURPDED utility program, run through job submission.

Technical Addendum

Also available is the Technical Addendum, which is a large, all-inclusive, hard-copy version of the output of the GURPDED process.

Even if you have a copy of the Technical Addendum, you should know how to gather table information directly from the database. It is better to use the Data Dictionary or GURPDED to create a customized Technical Addendum for your institution.

Third-party navigator

Finally, your institution may have a third-party navigator, which will be the tool that you will use instead of the data dictionary. These third-party products are NOT supported by SunGard Higher Education.

The Data Dictionary

Description

The Data Dictionary is a set of tables and views that are used as a read-only reference about the database.

The Data Dictionary stores information about both the logical and physical structure of the database.

Types of Data Dictionary views

- USER_xxxxx -- shows objects and events owned by user
- ALL_xxxxx -- shows all objects and events to which user has access
- DBA_xxxxx -- restricted; assigned only to those with DBA role
- ALL_TABLES - descriptions of tables
- ALL_COL_COMMENTS - comments on columns of accessible tables
- ALL_TAB_COLUMNS - lists of columns of all tables
- ALL_TAB_COMMENTS - comments on tables
- ALL_USERS - information on all users in database
- ALL_VIEWS - lists text of views accessible to user
- ALL_INDEXES - descriptions of indexes
- ALL_IND_COLUMNS - lists columns of the indexes

For a complete reference, refer to your Oracle documentation.

GURPDED Procedure

Description

This procedure is run from the Process Control Submission Form (GJAPCTL)

Parameters

Enter Parameters:

- Table Name
- Table Owner

Output

- Output = Technical Addendum
- To DATABASE
- View or Print from GJIREVO

Self Check - Data Dictionary Exercise

Exercise 1

Find out what indexes exist for the course catalog table (SCBCRSE).

Exercise 2

List the columns in the SCBCRSE indexes that you discovered.

Self Check - Data Dictionary Exercises – Answer Key

Exercise 1

Find out what indexes exist for the course catalog table (SCBCRSE).

```
   desc all_indexes;
select index_name
  from all_indexes
 where table_name = 'SCBCRSE';

     Result:     scbcrse_key_index
```

Exercise 2

List the columns in the SCBCRSE indexes that you discovered.

```
    select column_name
      from all_ind_columns
     where table_name = 'SCBCRSE'
       and index_name = 'SCBCRSE_KEY_INDEX';

Result: scbcrse_subj_code
        scbcrse_crse_numb
        scbcrse_eff_term
```

Banner 8 Common Enhancements

Introduction

This section provides an overview of the enhancements in Banner General 8.0 and Banner Student 8.0.

For more information on these enhancements, please refer to the *Banner 8 General Release Guide* or the Education Practices *Banner General Common Conventions* workbook.

Objectives

At the conclusion of this chapter, participants will be able to:

- identify enhancements to PIN security
- identify enhancements related to supplemental data
- identify enhancements made for Internationalization purposes
- identify enhancements made for partial data logging
- identify enhancements made for tab-level security

Internationalization Enhancement

Internationalization

Changes have been made to Banner General with the 8.0 release that enable international usage. These changes include the expansion of currency amount, address, phone, and name fields. These Internationalization enhancements will reduce the amount of custom modifications necessary to make Banner usable under those circumstances.

Unicode Support

Banner now supports the Unicode international character set through the character standard UTF8. The Oracle database will be converted to UTF8 as part of the Banner 8.x installation process.

Additional IDs

The Additional Identification Table (GORADID) allows storage of unlimited extra IDs for a person in Banner. Each Additional ID must be assigned an ID type, which is set up on the Additional Identification Type Validation (GTVADID) form and table.

A new **Additional ID** window on Identification forms displays Additional ID information.

Refer to the *Banner General 8.0 Release Guide* for more information on using additional IDs.

Expanded fields

Many fields, including the following, have been expanded on Banner tables and forms so as to accommodate longer data values.

- Name
- Address
- Telephone number
- E-mail address
- ID
- Currency amount
- Currency rate

For more information on Internationalization enhancements, please refer to the *Banner 8 General Release Guide*. In addition, the *Banner 8 Student Release Guide* contains additional information about the enhancements and what Student forms and fields are specifically affected.

Partial Data Masking

Enhancements

The ability to partially mask a field, which was introduced initially in Banner 7.0, has been extended in Banner 8.x to character fields. You can allow a specified number of characters at one side of a field to remain readable while masking the remainder of a value.

To support partial character masking, two new fields (**Partial Character Mask** and **Partial Unmasked Length**) have been added to the Data Display Mask Rules Form (GOTDMSK).

Please refer to the *Banner General 8.x Release Guide* for more information on these changes.

PIN Maintenance

Enhancements

Banner General 8.0 includes enhancements for user PIN (password) security.

- PINs are now stored only in encrypted form
- Institutions can set and enforce standards for strong passwords
- A new, more secure PIN reset mechanism has been established

New forms

- GOAQSTN – PIN Questions Form

Changed forms

- GUAPPFR – Enterprise PIN Preferences Form
- GOATPAC – Third Party Access Form
- GOATPAD – Third Party Access Audit Form

Please refer to the *Banner General 8 Release Guide* for more information on these changes.

Supplemental Data Engine

Enhancements

The Supplemental Data Engine allows storage of additional data that are not part of the existing Banner data model. Examples of the types of data affected are comments fields to record miscellaneous notes or data that has been translated into various languages.

No customization of Banner forms or tables is needed to capture and use additional data with SDE. The new data is displayed in a popup window, the Supplemental Data Window, and is stored in a supplemental data table. Because no customization is needed, supplemental data is generally not impacted by Banner upgrades.

Each supplemental data record created through SDE is tied to a specific Banner table, so any forms using that table will be able to access the same data through the Supplemental Data Window. Through SDE you can create additional fields associated with a specific Banner table but stored in a separate table, the Supplemental Data Table.

Although it is natural to think of supplemental data in terms of extra fields on Banner forms, SDE is tied to forms only indirectly.

There are several limitations of SDE, including the following.

- Not all tables, blocks, and forms work with SDE.
- The combination of SDE with Virtual Private Database (VPD) for use in Multi-Enterprise Processing is currently not supported.
- Masking is not currently supported with SDE.

Please refer to the *Banner General 8.x Release Guide* for more information on these changes.

Common Security Enhancements

Introduction

Banner 8.0 contains a number of changes to how Banner handles security and auditing. The focus of these changes is on the following improvements:

- Greater efficiency in security maintenance
- Enhanced Banner user account rules
- Additional user login controls
- Improved security auditing capabilities
- Secured delegation of responsibilities for distributed users

Oracle/Banner Security Administration form (GSASECR)

Business profiles can now be assigned to users in GSASECR. Business profiles are used in the setup of Fine-Grained Access Control (FGAC) rules. Previously, after you created a user in GSASECR, you had to go to an FGAC setup form to assign the user to a business profile.

Security groups offer a new layer of structure to give you more flexibility in setting up security for users with similar permissions. Security classes, objects, users, and roles can be assigned to a security group.

When creating a new user account, you can optionally associate the new user to an existing ID record from the SPRIDEN table.

When a user ID is created on GSASECR, you can now create it in locked or expired status.

You can create logon calendars that limit users' access to designated time periods with a specified start or end date. You can also limit the times of day or days of the week that a user can log on.

Auditing enhancements

This release adds more support for auditing Banner security activity.

- User and date records can now be logged for every change to every Banner security table.
- The new GURLOGN table can save a log with information on every Banner logon.
- New tables have been created to store detailed history of Banner security activity.
- A new Banner Security Table Audit History form provides easy, secure access to the security audit records.
- New fields have been added to show more details of changes to security classes in GSASECR.
- On the History tab of GSASECR, the user ID is now displayed with each command. In addition, the Command field has been made searchable.

To help you manage security auditing:

- On the GSASECR form, you can select the security tables will be audited at your institution.
- Because the security logs could grow to be quite large, a new tool lets designated security administrators purge old records from the security tables.

Other changes:

- A new *SECURITY menu provides convenient access to the expanded family of security administration forms.
- The User Identification Control form (GUAIDEN) now shows the user name associated with a user ID.

For more information on these enhancements, please refer to the *Banner 8 General Release Guide* or the Education Practices *Banner General Common Conventions* workbook.

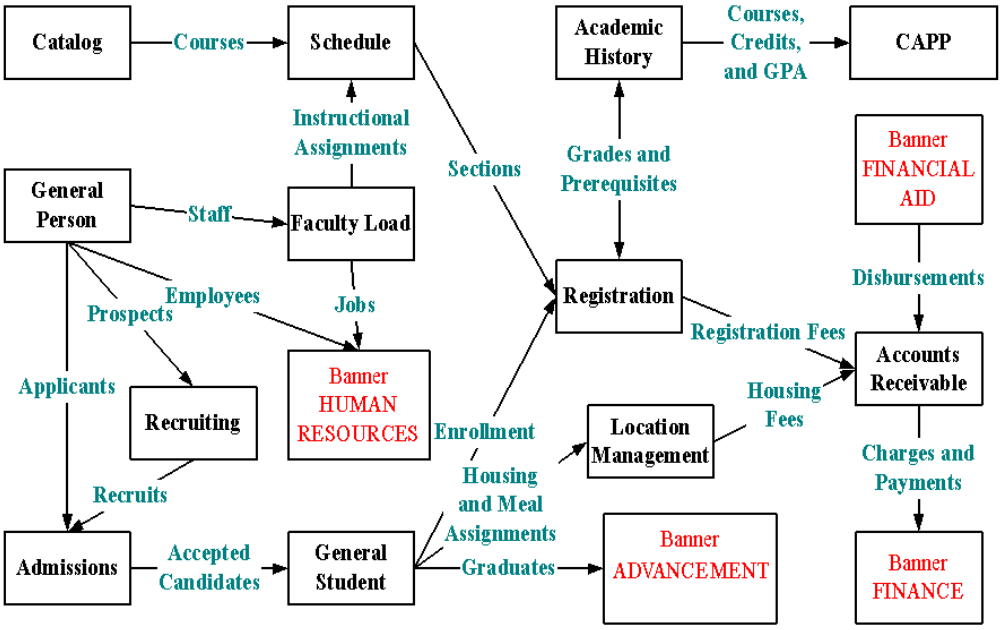
Course Catalog

Introduction

Objectives

At the end of this section, you will be able to describe the role and functions of the Course Catalog module.

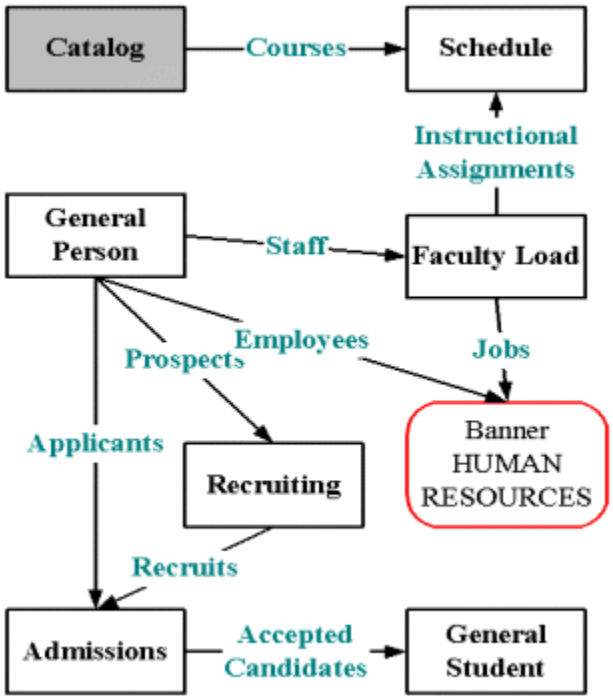
Diagram



You will begin with the Catalog module, one of the first to be converted. (You could also convert General Person first, depending on the needs of other systems.)

Course Catalog Module

Diagram



Legend

This diagram shows a part of the large overview diagram.

The Recruiting Module is OPTIONAL.

The GREEN boxes on the diagram indicate the primary content of the module.

Implementation

Banner must be implemented in a logical order.

We have organized this training presentation in a conversion order model. It would be recommended to convert either Catalog or General Person first, depending on the needs of other systems.

This order follows a general implementation order that allows clients to build the necessary rules and validation tables in the order that they are needed for successful implementation.

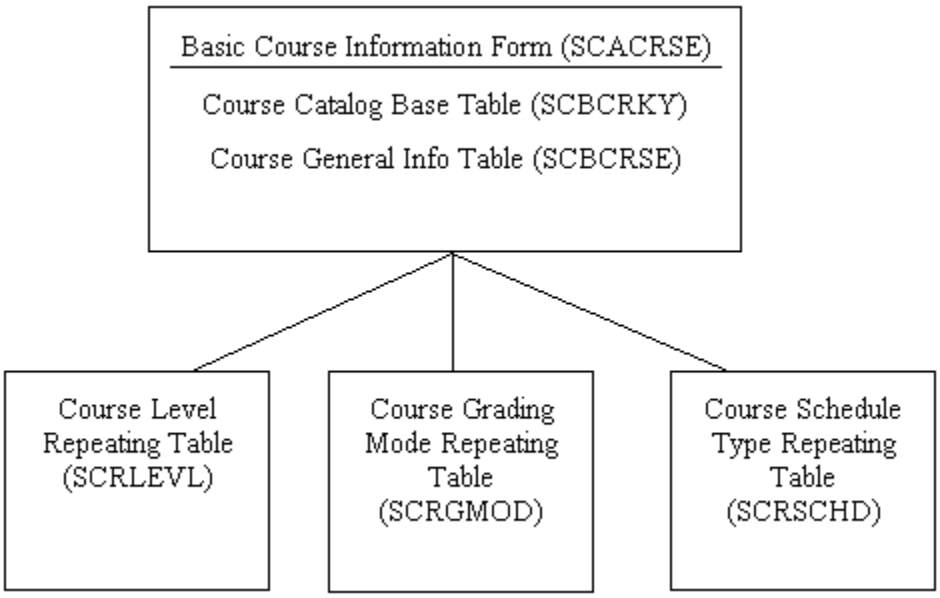
Objectives

Examine/Review:

- Major & Required Forms and Tables
- Reports, Processes and Procedures
- Review Referential Integrity
- Conversion of Data

Course Catalog

Diagram



Description

The Course Catalog module holds all general course information. It is used as the foundation for each term's schedule, but does not hold schedule information by term.

You cannot create a schedule for a term (and, therefore, students cannot register for a term) unless all courses are built in Catalog first.

Catalog controls the courses and the TYPE of courses (i.e. labs) that may be included in the Schedule.

Forms and tables

SCACRSE is the main form.

SCBCRSE, SCBCRKY, SCRLEVL, SCRGMOD, SCRSCHD are the main tables. All of these tables are required. (*RED asterisked (*)* text in the diagrams of this manual indicates required elements.)

Major Forms:

- SCABASE
- SCACRSE

Major Tables:

- SCBCRSE
- SCBCRKY
- SCRLEVL
- SCRGMOD
- SCRSCHD

Naming Conventions

Naming conventions

All Banner objects adhere to naming conventions.

Objects include forms, tables, processes, etc.

For more information, refer to Chapter 1 of the *Student Technical Reference Manual*.

Form, process and table naming

The names of all Banner forms (except menu forms), reports, processes and tables are seven characters long, with each character representing a position location.

Example:

Character: S C A C R S E

Position Location: 1 2 3 4 5 6 7

Position 1

Position 1 identifies the primary System that owns the form, report, process or table.

Note: The letters W, Y and Z are reserved for client applications which coexist with Banner.

Letter	System	Letter	System
A	Advancement	**O**	Customer Contact
B	Property Tax	**P**	HR / Payroll / Personnel
C	Courts	**Q**	Electronic Work Queue
D	Cash Drawer	**R**	Financial Aid
F	Finance	**S**	Student
G	General	**T**	Accounts Receivable
I	Information Access	**U**	Utilities
K	Work Management	**V**	Voice Response
L	Occupational Tax/License	**X**	Records Indexing
N	Position Control		

Position 2

Position 2 identifies the module that owns the form, report, process or table. The letter assignments will vary by System.

Position 3

Position 3 identifies the type of form, report, process or table.

Letter	Type	Letter	Type
A	Application form	**Q**	Query form
B	Base table/Batch COBOL process	**R**	Rule table, repeating table, or report/process
I	Inquiry form	**T**	General maintenance temporary table
O	Online COBOL process	**V**	Validation form/table or view

Positions 4 – 7

The remaining positions identify a unique four-character name for the form, report, process or table.

Example:

SCACRSE:

S Student

C Catalog

A Application

CRSE Course Information

Major Validation Tables/Forms

Validation forms

- Subject Code Validation Form (STVSUBJ)
- Term Code Validation Form (STVTERM)
- College Code Validation Form (STVCOLL)
- Course Status Code Validation Form (STVCSTA)
- Level Code Validation Form (STVLEVL)
- Grading Mode Code Validation Form (STVGMOD)
- Schedule Type Code Validation Form (STVSCHD)

Validation tables

Critical to each module are the related validation tables. Validation tables contain the codes that are acceptable to use in a particular field. If a code is not in the validation table, it cannot be used as data in that field.

Validation tables have a parent/child relationship with records. (The principle of referential integrity will be covered more thoroughly in a subsequent lesson.) Validation tables (parents) must be populated with correct codes before converting data which will populate the child records in the tables.

Basic Course Information Form (SCACRSE)

Components

- Key Block
- From and To Terms
- Fields Related to AR
- LOV Fields
- Level, Grade Mode, Schedule Type

Questions

How are the SCBCRSE and the SCBCRKY tables related?

What data elements are required in SCBCRSE, SCBCRKY and SCRLEVL?

How are level, grading mode, schedule types connected to a course?

```
SQL> desc scrlevl
SQL> desc scrgmod
SQL> desc scrschd
```

Common fields

Look at the fields that each has in common with SCBCRSE and SCBCRKY.

Note: Validation tables -- STV + 4-character identifier + _code

SCBCRSE and SCBCRKY

```
SCBCRSE
 Name                          Null?              Type
 ----------------------------  --------           ----
SCBCRSE_SUBJ_CODE              NOT NULL           VARCHAR2(4)
SCBCRSE_CRSE_NUMB              NOT NULL           VARCHAR2(5)
SCBCRSE_EFF_TERM                                  VARCHAR2(6)
…
SCBCRKY_SUBJ_CODE              NOT NULL           VARCHAR2(4)
SCBCRKY_CRSE_NUMB              NOT NULL           VARCHAR2(5)
SCBCRKY_TERM_CODE_START        NOT NULL           VARCHAR2(6)
SCBCRKY_TERM_CODE_END          NOT NULL           VARCHAR2(6)
```

Note: A relationship exists between subj_code and crse_numb.
If scbcrse_eff_term is populated, then scbcrky_term_code_start must be >= scbcrse_eff_term.

Conversion Issues

Questions

Will Course Catalog data be converted or entered manually by the users?

What course catalog data do you have in your legacy system?

How do you determine where to put it in Banner?

Legacy data

If there is legacy data which does not have an obvious place in the required tables, look at other catalog module tables. To see all tables in the Course Catalog module:

```
select table_name,comments
  from all_tab_comments
 where table_name like 'SC%';
```

- College/Department Table (SCBCDEP)
- Course Catalog Base Table (SCBCRKY)
- Course General Information Base Table (SCBCRSE)
- Supplemental Course Data Table (SCBSUPP)
- Course Attribute Repeating Table (SCRATTR)
- College/Department Text Table (SCRCDTX)
- Course Corequisites Repeating Table (SCRCORQ)
- Equivalent Course Repeating Table (SCREQIV)
- Course Fees Repeating Table (SCRFEES)
- ...etc.

Reports/Processes

SCRBULT

SCRBULT -- Bulletin Report

- Prints catalog of courses
- Parameter: Academic Year (see STVACYR)
- C program
- Run via Job Submission

Actions

Go to Banner Job Submission to run this report.

Send the report output to GJIREVO.

Type “DATABASE” in the printer field to view the report output within Banner.

If you are unfamiliar with Job Submission, it is covered in more detail in the General Technical training course.

Catalog Extract and Load Enhancement

Introduction

The Banner Student 8.0 release contains a catalog extract and load enhancement that provides the ability to

- exchange the necessary course catalog data for transfer articulation purposes
- extract course catalog data into a file that can be transmitted to an external institution
- import external catalog data into the appropriate transfer articulation data structures
- update existing but previously imported transfer articulation data
- store course descriptions and course attributes for transfer courses
- copy transfer course data from one institution to another.

Changed forms

- Transfer Institution Catalog Entry Form (SHATATC)
- Transfer Course Articulation Form (SHATATR)
- Source/Background Access Form (SOASBGA)

New reports and processes

- Course Catalog Data Extract Process (SCRCATE)

  This new Java process is used to extract course catalog data and create an XML output file of that data. An institution can post the output file on an unsecured page of its website where people seeking the data can download it to their workstations.

- Transfer Catalog Data Import Process (SHRTCIM)

  This new Java process is used to import an XML extract file of course catalog data into a Banner database.

For more information on this enhancement, please refer to the *Banner Student 8.0 Release Guide*.

Self Check - Course Catalog Exercises

Exercise 1

Get the following information about any two of the Course Catalog module tables:

- Table Owner
- Table Name
- Column Name
- Data Type
- Null/Not Null Column

Hint: You will use the data dictionary view “all_tab_columns”

Exercise 2

Get the following information from the course catalog module about all courses with a subject code of 'ENGL':

- subject code
- course number
- course title
- effective term
- start term
- end term

Hint: You will need to use SCBCRSE and one other table.

Exercise 3

Write a select statement that would produce a catalog report which includes the following (no formatting necessary):

- subject code
- course number
- course title
- effective term
- start term
- course level
- grade mode

Hint: You will need to use SCBCRSE and 3 other tables.

Self Check – Course Catalog Exercises – Answer Key

Exercise 1

Get the following information about any two of the Course Catalog module tables:

- Table Owner
- Table Name
- Column Name
- Data Type
- Null/Not Null Column

Hint: You will use the data dictionary view “all_tab_columns”

```
Step 1:
SQL> desc all_tab_columns
Name                 Null?          Type
 OWNER               NOT NULL  VARCHAR2(30)
 TABLE_NAME          NOT NULL  VARCHAR2(30)
 COLUMN_NAME         NOT NULL  VARCHAR2(30)
 DATA_TYPE                     VARCHAR2(9)
 DATA_LENGTH         NOT NULL  NUMBER
 DATA_PRECISION                NUMBER
 DATA_SCALE                    NUMBER
 NULLABLE                      VARCHAR2(1)

Step 2:
SQL>  SELECT owner, table_name, column_name,
             data_type, nullable
        FROM all_tab_columns
       WHERE table_name like ‘SC%’;
```

Exercise 2

Get the following information from the course catalog module about all courses with a subject code of 'ENGL':

- subject code
- course number
- course title
- effective term
- start term
- end term

Hint: You will need to use SCBCRSE and one other table.

Step 1:

```
SQL> desc scbcrse
SQL> desc scbcrky
```

Step 2:

```
SQL> SELECT scbcrse_subj_code,
  2   scbcrse_crse_numb,
  3   scbcrse_title,
  4   scbcrse_eff_term,
  5   scbcrky_term_code_start,
  6   scbcrky_term_code_end
  7  FROM  scbcrky,
  8   scbcrse
  9  WHERE  scbcrse_subj_code = scbcrky_subj_code
 10  AND   scbcrse_crse_numb = scbcrky_crse_numb
 11  AND  scbcrse_subj_code = 'ENGL'
 12  /
```

```
SCBC SCBCR SCBCRSE_TITLE                SCBCRS SCBCRK SCBCRK
---- ----- ------------------------------ ------ ------ ------
ENGL 1005  Literature & Composition I     199510 199510 999999
ENGL 1005  Literature & Composition I     199610 199510 999999
ENGL 1005  Literature & Composition I     199620 199510 999999
ENGL 1006  Literature & Composition II    199510 199510 999999
ENGL 101   English Composition            198710 198710 999999
ENGL 101   English Composition            199010 198710 999999
ENGL 101A  Computer Literacy              198710 198710 999999
ENGL 103   20th Century American Lit      199510 199510 999999
ENGL 1050  The Literary Experience        199510 199510 999999
ENGL 107   World Lit                      199010 199010 999999
ENGL 108   World Lit                      199010 199010 999999
ENGL 109   World Lit                      199010 199010 999999
ENGL 1201  Survey of American Lit I       199510 199510 999999
ENGL 201   Topics in English              198710 198710 999999
ENGL 310   African American Prose         199010 199010 999999
ENGL 311   African-American Poetry        199010 199010 999999
ENGL 312   African American Drama         199010 199010 999999
ENGL 408   Topics in English Lit          199520 199520 999999
ENGL 410   Topics in American Lit         199520 199520 999999

19 rows selected.
```

Exercise 3

Write a select statement that would produce a catalog report which includes the following (no formatting necessary):

- subject code
- course number
- course title
- effective term
- start term
- course level
- grade mode

Hint: You will need to use SCBCRSE and 3 other tables.

```
SQL> SELECT scbcrse_subj_code,
  2   scbcrse_crse_numb,
  3   scbcrse_title,
  4   scbcrse_eff_term,
  5   scbcrky_term_code_start,
  6   scrlevl_levl_code,
  7   scrgmod_gmod_code
  8  FROM scrgmod, scrlevl, scbcrky, scbcrse
  9  WHERE scbcrse_subj_code = scrlevl_subj_code
 10  AND scbcrse_crse_numb = scrlevl_crse_numb
 11  AND scbcrse_eff_term =  scrlevl_eff_term
 12  AND scbcrse_subj_code = scrgmod_subj_code
 13  AND scbcrse_crse_numb = scrgmod_crse_numb
 14  AND     scbcrse_eff_term = scrgmod_eff_term
 15  AND scbcrse_subj_code = scbcrky_subj_code
 16  AND scbcrse_crse_numb = scbcrky_crse_numb
 17  /
```

Referential Integrity

Introduction

Objectives

At the end of this section, you will be able to describe referential integrity concepts and how they are implemented in Banner.

Referential Integrity

Importance

Referential integrity is reviewed here because of the importance of understanding it in relation to conversion. All required validation tables needed for a module must be populated before populating other data tables within each module.

Ideally, those attending this class should have taken the DBA Toolkit class or have a basic familiarity with SQL.

Types of Data Integrity

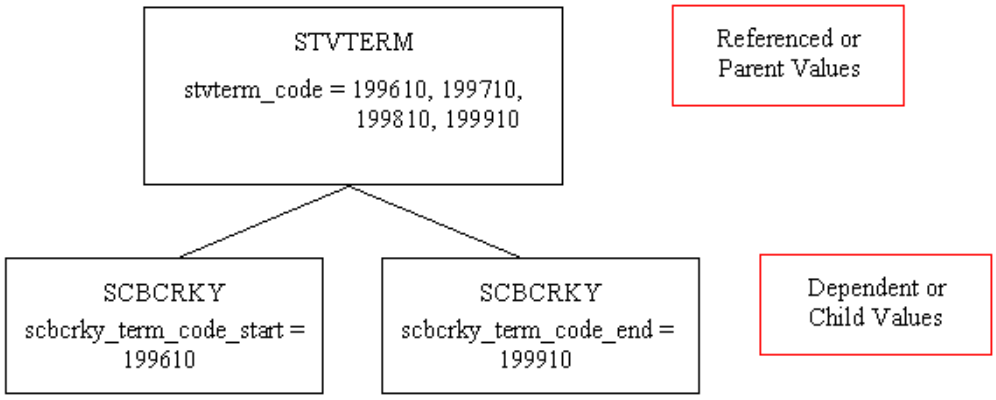
- Nulls
- Unique Column Values
- Primary Key Values
- Referential Integrity

* Source: *Oracle 7 Server Concepts*

In any discussion of implementation of Banner and conversion to Banner, we must consider referential integrity, which has a direct influence over the order of conversion and implementation.

Referential Integrity Illustrated

Diagram



Parent and child

STVTERM is the parent; SCBCRKY is the child. Term values cannot appear in SCBCRKY fields unless they are in STVTERM.

A rule defined on a column (or set of columns) in one table that allows the insert or update of a row only if the value for the column or set of columns (the dependent or child value) matches a value in a column of a related table (the referenced or parent value).*

* Source: *Oracle 7 Server Concepts*

Referential Integrity Key Types

Key types

Referential Integrity relies on two types of keys:

- Primary Keys
- Foreign Keys

These keys are implemented as *constraints* which enforce unique, non-null keys.

Two Integrity Rules

Entity integrity:

- No attribute participating in the primary key of a base relation is allowed to accept null values.

Referential integrity:

If a base relation includes a foreign key matching the primary key of some other base relation, then every value of the foreign key in the 1st base relation must either be equal to the value of the primary key in some tuple (row) of the other base relation ***OR*** be wholly null (i.e., each attribute value participating in that foreign key value must be null). The two base tables are not necessarily distinct.

The basic intent of this rule is that if some tuple t2 references some tuple t1, then t1 must exist. A given foreign key value must have a matching primary key value somewhere in the referenced relation if that foreign key value is **non null**.

Primary Key Constraints

Constraints

Primary Key - special case of a candidate key -- unique identifier -- absolutely fundamental to the operation of the overall relational model -- to enforce unique, non-null keys

Uniqueness - At any given time, no two distinct rows or records of a relation have the same value for any given attribute

Minimality - None of the attributes can be discarded from the set of attributes without destroying the uniqueness property

Primary key

Every relation has at least one candidate key, because at least the combination of all of its attributes has the uniqueness property. One candidate key is designated at the primary key. The remaining candidate keys (if any) are called alternate keys.

(Example: SPRIDEN: PIDM and LAST_NAME -- ***If*** they were each "unique" then the relation has two candidates, PIDM & LAST_NAME. PIDM could be chosen as the primary key; LAST_NAME then becomes an alternate key.)

Note: PIDM & LAST_NAME are NOT unique.

Banner naming convention

PK_ + primary key table name

Example: PK_STVTERM is defined by:

```
alter table STVTERM
add constraint PK_STVTERM
Primary key (stvterm_code)
```

For Definition of Primary Key Integrity Constraints: Refer to p. 7-10 in ***Oracle 7 Server Concepts***

Data dictionary views

Oracle 7 Server Reference contains a listing of all data dictionary views, such as all_constraints, etc. The Data Dictionary views all_constraints and all_cons_columns as a way of getting detailed information about all constraints.

```
desc user_constraints  and all_constraints
 select *
   from all_constraints
  where table_name = 'STVTERM';
```

ALTER statements

To see “alter” statements that create primary key constraints for a table (ex: SCBCRKY):

In SQL*PLUS, run GURRDDL script for SCBCRKY:

```
alter table SCBCRKY
add constraint PK_SCBCRKY
Primary key (scbcrky_subj_code, scbcrky_crse_numb)
```

Foreign Key Constraints

Foreign key

A foreign key is an attribute (or attribute combination) in one relation whose values are required to match those of the primary key of some other relation, to ensure that children are not updated/inserted if parent rows do not exist and to prevent the deletion of parents if children do exist.

Foreign-to-primary-key matches represent *references* from one relation to another; they are the “glue” that holds the database together.

Examples:

- STVTERM Primary Key: STVTERM_CODE
- SGBSTDN Foreign Key: TERM_CODE_EFF

(which is part of the primary key of SGBSTDN)

GURRDDL

If you run gurrddl you can see the alter statements defining the foreign keys related to STVTERM. This is for SGBSTDN_TERM_CODE_EFF:

```
ALTER TABLE SATURN.SGBSTDN
ADD CONSTRAINT FK3_SGBSTDN_INV_STVTERM_CODE FOREIGN KEY
  (SGBSTDN_TERM_CODE_EFF)
  REFERENCES SATURN.STVTERM
  (STVTERM_CODE) ;
```

Definitions

Foreign Key: The column or set of columns included in the definition of the referential integrity constraint that reference a *referenced key*.*

Referenced Key: The unique or primary key of the same or different table that is referenced by a foreign key*.

Dependent or Child Table*:* The table that includes the foreign key and is therefore dependent on the values present in the referenced unique or primary key.

Referenced or Parent Table*:* The table that is referenced by the child table's foreign key and which determines whether specific inserts or updates are allowed in the child table.

* Source: *Oracle 7 Server Concepts*

Naming convention

FKn_ + foreign table_ + INV_ + Primary table_ + CODE

where

- "n" is a one-up number
- foreign table is the table that contains the constraint
- primary table is the table which contains the primary or referenced key

Example: FK1_SCBCRKY_INV_STVTERM_CODE

Note: The underscore character (_) separates each element of the name.

Creating Foreign Key Constraints

Alter Statement

FKn_ + foreign table_ + INV_ + Primary table_ + CODE

```
FK1_SCBCRKY_INV_STVTERM_CODE
   alter table SCBCRKY
     add constraint FK1_SCBCRKY_INV_STVTERM_CODE
     foreign key (SCBCRKY_TERM_CODE_START)
     references SATURN.STVTERM (STVTERM_CODE);
```

Before you can enter a term code in SCBCRKY it must exist in STVTERM.

STVTERM codes cannot be deleted if they exist in other tables.

Example 1

```
   select constraint_name
     from all_constraints
    where table_name = 'SCBCRKY'


   SYS_C002703  NOT NULL
   SYS_C002704  NOT NULL
   SYS_C002705  NOT NULL
   SYS_C002706  NOT NULL
   SYS_C002707  NOT NULL
   PK_SCBCRKY   PRIMARY KEY CONSTRAINT
   FK1_SCBCRKY_INV_STVSUBJ_CODE  Foreign Key for Subject Code
   FK1_SCBCRKY_INV_STVTERM_CODE  Foreign Key for term_code_start
   FK2_SCBCRKY_INV_STVTERM_CODE  Foreign Key for term_code_end
```

Example 2

```
SQL> SELECT  constraint_name,
             constraint_type,
             status
       FROM  all_constraints
      WHERE  table_name =  SCBCRSE';


CONSTRAINT_NAME                CON.  TYPE  STATUS
-----------------------------------------------
FK1_SCBCRSE_INV_STVAPRV_CODE          R   ENABLED
FK1_SCBCRSE_INV_STVCIPC_CODE          R   ENABLED
FK1_SCBCRSE_INV_STVCOLL_CODE          R   ENABLED
FK1_SCBCRSE_INV_STVCSTA_CODE          R   ENABLED
FK1_SCBCRSE_INV_STVDEPT_CODE          R   ENABLED
FK1_SCBCRSE_INV_STVDIVS_CODE          R   ENABLED
FK1_SCBCRSE_INV_STVPWAV_CODE          R   ENABLED
FK1_SCBCRSE_INV_STVREPS_CODE          R   ENABLED
FK1_SCBCRSE_INV_STVSUBJ_CODE          R   ENABLED
FK1_SCBCRSE_INV_STVTERM_CODE          R   ENABLED
```

Type 'R' = Referential Integrity Constraint;

This illustrates the connection to the Validation tables.

Validation Tables/Codes

Example

POSITIONS 9th 14th

S C B C R S E _ S U B J _ C O D E

TABLE NAME Validation

Description

|

\/

S T V S U B J

Referential Integrity: Summary

Summary

- Enforces unique, non-null columns
- Establishes relationship between parent and child tables
- Parent table row has the Primary Key constraint
- Child table row has the Foreign Key constraint
- Parent row can not be deleted when a child row exists (the child row must be deleted first)

Examples

- 199101 must exist in STVTERM before inserting a record in SCBCRKY with term_code_eff = 199101
- 199101 cannot be deleted from STVTERM if SCBCRKY record exists with 199101 term_code_eff
- Check constraints: to enforce integrity issues specified by the check condition -- prefix would be “cc”
- Unique constraints: designates a column or a combination of columns as a unique key -- prefix is “uk”

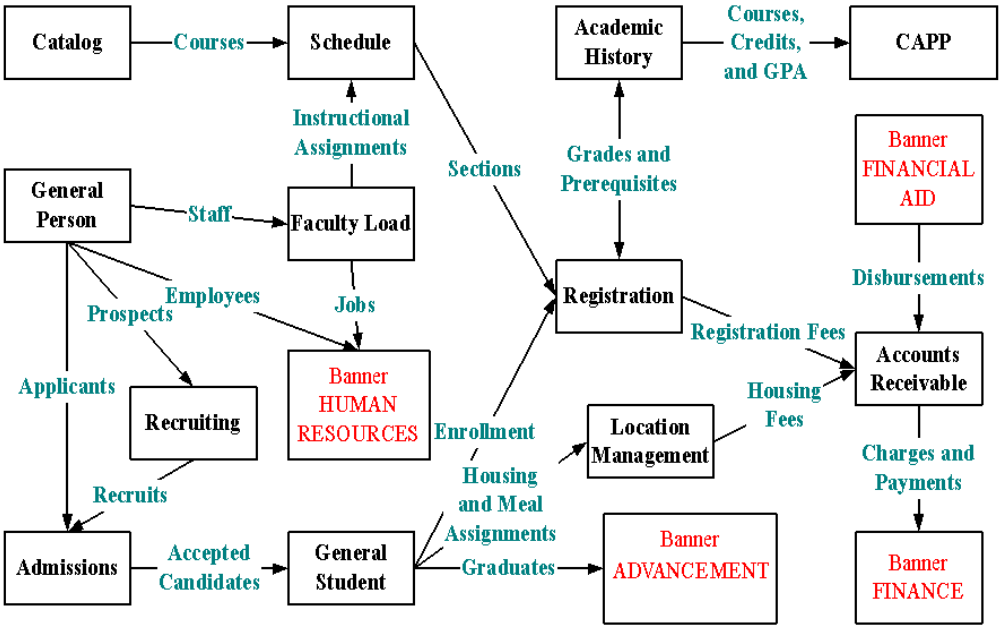
General Person

Introduction

Objectives

At the end of this section, you will be able to describe the role and functions of the General Person module.

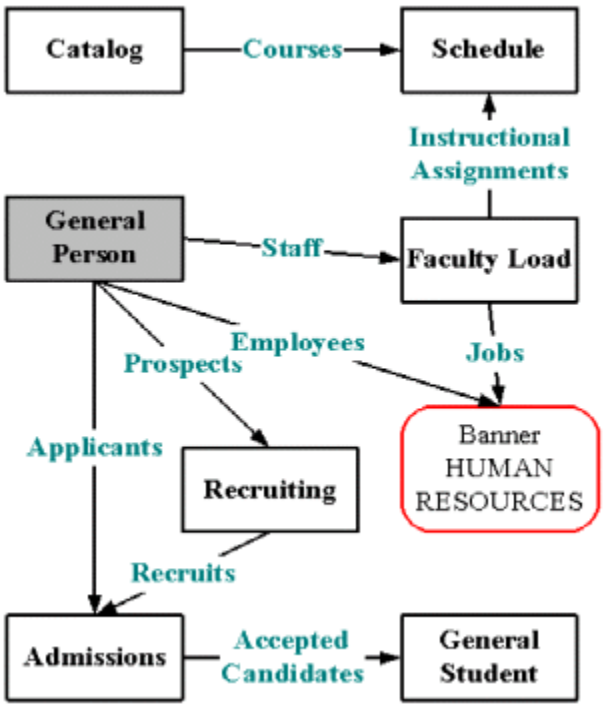
Diagram



General Person is often the first module to be converted because of its reach into other modules, and into other products as well.

General Person Module

Diagram



The arrow descriptors on the diagram indicate the primary content of the module.

Overview

Data entry standards are important in all modules, but because General Person allows many opportunities for freeform data entry, it is appropriate to discuss data standards. It is also important to establish institutional data standards before converting legacy data.

Before a person can become a recruit, applicant, student, instructor, advisor, or have an account, the person must first be identified to the system with an identification number and a name.

A person is initially added to the system using the SPAIDEN form, which maintains a person's identification number.

General Person Module: Objectives

Objectives

Examine:

Major & Required Forms and Tables

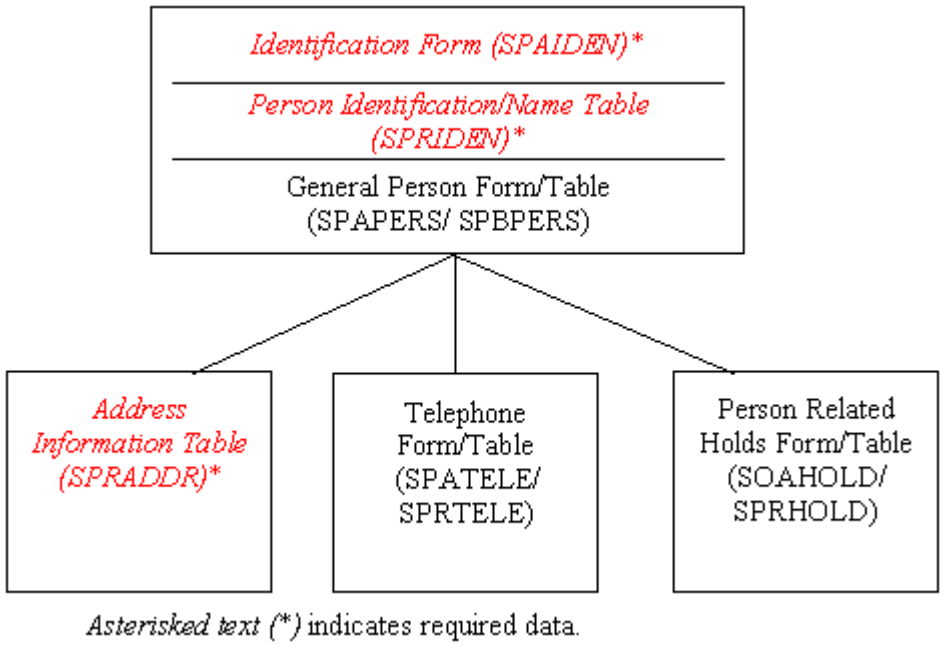
- SOBSEQN, PIDM

Data standards

- SPRIDEN, SPBPERS indicators
- SPRPDIR process
- Conversion of data
- Stores all biographic and demographic info about an entity in the database.

General Person Forms and Tables

Diagram



Asterisked text (*) indicates required data.

Forms and tables

SPRADDR and SPRTELE data are viewed from SPAIDEN.

Although SPBPERS is not required, it is used as if it is, and it will be discussed in this lesson. The same principle applies to SPRTELE AND SPRHOLD -- most schools use them.

SPBPERS student data is typically maintained by the Registrar's Office for purposes of Federal and State Reporting.

If the institution has the Banner HR product, the HR office may maintain general person data for employees.

Major forms

- Identification Form (SPAIDEN)
- General Person Form (SPAPERS)
- Telephone Form (SPATELE)
- Hold Information Form (SOAHOLD)

Note: There is no SPAADDR form. Address information data is entered through SPAIDEN.

Major tables

- Identification Table (SPRIDEN)
- General Person Table (SPBPERS)
- Address Information Table (SPRADDR)
- Telephone Table (SPRTELE)
- Person Related Holds Table (SPRHOLD)

Major Validation Tables/Forms

- Address Type Code Validation Form (STVATYP)
- State/Province Code Validation Form (STVSTAT)
- Nation Code Validation Form (STVNATN)
- ZIP/Postal Code Validation Form (GTVZIPC)
- Telephone Type Validation Form (STVTELE)
- Hold Type Code Validation Form (STVHLDD)

These tables have to be populated before converting other general person tables.

PIDM and SOBSEQN

PIDM

A *pidm* is a ***P***erson ***ID***entification ***M***aster, an internal key field used to identify and store records. This is a numeric data type.

Non-Persons, such as vendors, can also have pidms.

Pidms reduce the possibility of creating multiple identification numbers or entries for the same person/entity.

If Banner is used correctly, one person could have multiple IDs or name iterations but only one pidm. Extensive name searches and proper matching procedures further help to eliminate multiple entries for the same person.

SOBSEQN

SOBSEQN is a table which stores numbers used to generate pidms and other sequence numbers.

It is built before Oracle incorporates sequence objects.

All numbers should be set to zero during production setup.

Maintenance access should be at highest security level.

Contents of SOBSEQN

```
select * from sobseqn;

SOBSEQN_FUNCTION               S SOBSEQN_MAXSEQNO SOBSEQN_A
------------------------------ - --------------- ---------
RECEIPT                                      210 15-JUN-98
ID                             @              47 24-JUN-98
PIDM                                         559 26-JUN-98
ALUMNIGIFT                                    43 16-JUN-98
ALUMNIPLEDGE                                  23 07-JUN-98
EDIREQUESTID                                   1 25-APR-95
EDI_DCMT_SEQNO                                 1 08-DEC-95
ALUMNIDUES                                     3 06-MAY-97
ALUMNIRECEIPT                                  1 31-JAN-96
EVENT                          A               4 18-JUN-98
HRREQ                          R               0 31-JAN-96
```

Maximum Sequence Number = Last number used.

The setting of *maxseqno* will be discussed in greater detail in the Conversion lesson.

IDM and SOBSEQN

To use the SOBSEQN table in conversion, get the maximum pidm;

```
SELECT sobseqn_maxseqno
  FROM  saturn.sobseqn
 WHERE sobseqn_function = 'PIDM'
```

Increment sobseqn_maxseqno by 1, and update SOBSEQN with the next pidm;

```
UPDATE saturn.sobseqn
   SET sobseqn_maxseqno = sobseqn_maxseqno + 1
 WHERE sobseqn_function = 'PIDM'
```

ID and SOBSEQN

The column *sobseqn_seqno_prefix* allows the client to determine the character which will precede a generated ID.

For example, a sobseqn_seqno_prefix set to "@" precedes the generated ID: *@00000001.*

A user can set the prefix to be any character. The prefix designates that an ID is assigned by the system and not entered manually.

Warning: If your institution is using Voice Response, check for conflicts or compatibility issues with special characters.

Data Standards

Names

Omit spaces within prefixed last names:

- MacArthur O'Connor VanHusen
- St.John deBolt DuShen

Omit spaces within hyphenated last names:

- Smith-Jones Cochram-Ashley

Use the conventional mixed-case format.

Punctuation

Use periods after prefixes and suffixes where applicable:

- Miss Mrs. Mr. Jr. III

Example:

- Prefix Firstname Hyphenated Last name
- Mrs. Joann Robinson-O'Connor

Names should have no spaces -- this makes it easier to use name search in SOAIDEN.

Special characters

Avoid use of the pound sign (#). Banner Letter Generation identifies a pound sign as a formatting command.

Avoid the use of the following special characters (see Student Technical Reference Manual, Chapter 5):

- / * + # & @ $

This will increase the efficiency of Banner, FOCUS, BannerQuest, and any other database accessing tool, helping to minimize confusion for users.

Conversion and standard compliance

In conversion, you may need to “massage” the data in order for it to comply to standards.

Your institution may set up a committee to review and set data standards which will be documented. The committee may also make decisions regarding which office has “change control” or “maintenance responsibility” for specific data -- particularly IDs, names, and addresses. If other areas are implemented, such as HR, Finance and/or Advancement, decisions need to be made about maintenance responsibility.

Refer to the Conversion chapter of the Student System Technical Reference Manual.

Date formats (MDY, DMY, YMD)

GUAINST uses radio buttons to determine which date format is used in Banner.

- MDY January 5, 1995 is entered as 01/05/95
- DMY January 5, 1995 is entered as 05/01/95
- YMD January 5, 1995 is entered as 95/01/05

- If you enter only part of the date, the rest of the current date defaults
- If you are including a date in query criteria, always include the century
- You can enter a dash (-) instead of a slash (/)

Job Submission uses DD-MON-YYYY format in GJAPCTL. Accounts Receivable uses DD-MON-YY format.

Remember the date formatting that has been chosen and use that format when entering dates in the exercises.

Century

The **Century Pivot** field in GUAINST determines the cutoff year for determining which century a two-digit year belongs to. The value entered in this field will be the earliest year assigned to the 20th century.

For example, if **Century Pivot** is set to 27 and the Date Format record group is set to MDYY, then dates convert in this manner:

- 1-5-19 Converts to 05-JAN-2019
- 1-5-20 Converts to 05-JAN-2020
- 1-5-27 Converts to 05-JAN-1927
- 1-5-28 Converts to 05-JAN-1928
- 1-5-78 Converts to 05-JAN-1978
- 1-5-92 Converts to 05-JAN-1992

If you are querying information and part of the query is a year, you need to enter the century and the year to insure accuracy in your selections.

Note: Century can be overwritten when doing data entry.

Oracle format

In writing scripts, reports, etc., the ORACLE 'DD-MON-RR' date format provides additional flexibility:

- 50 - 99 = 20th century
- 00 - 49 = 21st century

See ***Oracle7Server SQL Language Reference Manual***

General Person Procedures

Add a new person

- Navigate to SPAIDEN.
- Add a person to the form.
- Generate an ID.
- Enter Name Information (including suffix or prefix).
- Add Address Information.
- Save this information.
- Rollback to the key block.

Edit a person's ID/address

- Enter SPAIDEN again (Next Block).
- Change the ID.
- Save.
- Change the middle name.
- Save.
- Add another address (different type).
- Save.
- Rollback to the key block.

Query for a person

- Use the **LOV** field to access SOAIDEN.
- Perform a query to find the person you just entered.
- Notice the change indicators (I,N).
- Exit SPAIDEN.

Name search consistency

It is important for data entry staff to perform extensive, careful and consistent name searches before entering a new person/entity into the system.

Users need to know that their username is stored in the table along with the data they entered, so their errors are traceable!

Once duplicate records are entered for the same person, it is very difficult and time-consuming to correct the problem, especially if financial transactions have occurred.

Enter General Person information

- Navigate to SPAPERS.
- Enter SSN (SIN in Canada).
- Enter Birth Date.
- Enter Confidentiality Indicator.
- Save.
- Exit SPAPERS.

Place holds on records

- Navigate to SOAHOLD.
- Use **LOV** field to see list of holds.
- Place 2 different types of holds on your record.
- Save.

Query for your record in SPRIDEN

Describe SPRIDEN.

Write a query to retrieve the data that was entered in SPRIDEN today

```
where spriden_activity_date like sysdate
```

Notice the data in:

- spriden_change_ind
- spriden_search_last_name
- spriden_soundex_last_name
- spriden_entity_ind
- spriden_pidm

Query for your record in SPBPERS

Describe SPBPERS.

Write a query to retrieve the data that you entered in SPBPERS

```
where spbpers_activity_date like sysdate
```

Notice the data in:

- spbpers_prefix
- spbpers_suffix
- spbpers_ssn
- spbpers_confidential_ind
- spbpers_activity_date

Note: SSN is NOT required. If institution does not use SSN or SIN (Canada) for ID, yet wishes to keep SSN stored in database for other purposes, SSN must be entered HERE.

Query for your record in SPRADDR

Describe SPRADDR

Write a query to retrieve the data that you entered in SPRADDR

```
select *
  from SPRADDR
 where spraddr_activity_date like sysdate;
```

Notice the data in :

- spraddr_atyp_code
- spraddr_seq_no
- spraddr_from_date
- spraddr_to_date

Note: To get information from yesterday instead of today, use

like sysdate – 1 instead of *like sysdate*.

Note: If a student changes addresses for a defined period of time, you would populate the **from** and **to_date** fields. These must be accounted for in reporting.

Query for your record in SPRHOLD

Describe SPRHOLD

Write a query to retrieve the data that you entered in SPRHOLD

```
select *
  from SPRHOLD
 where sprhold_activity_date like sysdate;
```

Notice the data in:

- sprhold_hldd_code
- sprhold_user
- sprhold_from_date
- sprhold_to_date

Person Directory (SPRPDIR)

The Person Directory (SPRPDIR) produces a list of persons, addresses, and primary phone numbers by type of person:

- Recruit (R)
- Applicant (A)
- Student (S)
- Faculty (F)

Tables and views used

Tables used in SPRPDIR.pc:

- SPBPERS - General Person Info Table
- SRBRECR - Recruit Information Table
- SARADAP - Applicant Information Table
- SGBSTDN - Student Information Table
- SIBINST - Faculty Information Table
- SPRCOLR - Address Collector File
- SPRTELE - Telephone Number Table

View used in SPRPDIR.pc:

- SPVADDS - Address View

Parameters

- Term, Type, Confidentiality Indicator
- Address Type, Print ID, Faculty type (A,I,B)
- Population Selection Can Be Used
- C program
- Run via Job Submission

Example

To see a view that would be handy to modify for reporting purposes, take a look at **gpvent0.sql** in **$BANNER_HOME/general/views/gpvent0.sql**.

Conversion Issues

Issues

What additional general person data do you have in your legacy system?

- Become familiar with all General Person forms and tables

```
select table_name,comments
  from all_tab_comments
 where table_name like 'SP%';
```

- How do you determine where to put it in Banner?
- Consult users about where to put data

Other Scripts

$BANNER_HOME/general/views

- views (gpv*)
- ag_entity_data: Object:Access view which presents general person data (gpvent0.sql)

Object:Access views are used in conjunction with the Object:Access method of retrieving data from database. This uses the concept of “layered” views; you must have the GTVSDAX form/table populated with crosswalk values.

Clients should know the naming conventions and the locations of these other database object creation scripts. To use them as models, create your own MODS directory (as discussed earlier in this course) and put any modifications in there.

Self Check – General Person Exercises

Exercise 1

Write a query to return the pidm, id, first name, middle name, last name, and change indicator for persons who have had changes made to their SPRIDEN records today.

Exercise 2

Write a query to return the id, first name, last name, and change indicator for the record that you entered about yourself in the database today. There should be an ID change indicator ('I'), a name change indicator ('N') and a record in which the change indicator IS NULL. Have the query prompt you for the pidm.

Exercise 3

Write a query to select the pidm, id, first name, last name, change indicator, social security number (from SPBPERS) where changes were made to the ID records in SPRIDEN.

Exercise 4

Write a query to extract information that you would use on a mailing label. For this query, select the address type that appears the maximum number of times in the SPRADDR table. You should extract the most current record from the SPRIDEN table. For purposes of simplicity, assume that all SPRADDR records for this address type are current.

Self Check – General Person Exercises – Answer Key

Exercise 1

Write a query to return the pidm, id, first name, middle name, last name, and change indicator for persons who have had changes made to their SPRIDEN records today.

```
SQL> SELECT  spriden_pidm,
  2   spriden_id,
  3   substr(spriden_last_name,1,15)  ||
  4   ', '                            ||
  5   substr(spriden_first_name,1,15) ||
  6   ' '    ||
  7   substr(spriden_mi,1,1),
  8   spriden_change_ind
  9  FROM spriden
 10  WHERE  spriden_entity_ind      = 'P'
 11  AND  spriden_activity_date like sysdate
 12  /
```

Exercise 2

Write a query to return the id, first name, last name, and change indicator for the record that you entered about yourself in the database today. There should be an ID change indicator (‘I’), a name change indicator (‘N’) and a record in which the change indicator IS NULL. Have the query prompt you for the pidm.

```
SQL>  SELECT spriden_id, spriden_last_name,
  spriden_first_name, spriden_change_ind
    FROM spriden
   WHERE spriden_entity_ind      = ‘P’
     AND spriden_activity_date like sysdate
     AND spriden_pidm = ‘&pidm’;
```

Exercise 3

Write a query to select the pidm, id, first name, last name, change indicator, social security number (from SPBPERS) where changes were made to the ID records in SPRIDEN.

```
SQL>  SELECT spriden_pidm, spriden_id,
             spriden_first_name, spriden_last_name,
             spriden_change_ind, spbpers_ssn
        FROM spbpers, spriden
       WHERE spriden_pidm = spbpers_pidm
         AND spriden_change_ind = 'I'
```

Note: spriden_id is not necessarily the same as spbpers_ssn. That is an institutional decision.

Exercise 4

Write a query to extract information that you would use on a mailing label. For this query, select the address type that appears the maximum number of times in the SPRADDR table. You should extract the most current record from the SPRIDEN table. For purposes of simplicity, assume that all SPRADDR records for this address type are current.

```
Step 1:
SQL>SELECT DISTINCT spraddr_atyp_code, count(*)
      FROM spraddr
  GROUP BY spraddr_atyp_code

RESULT:   List of address types with counts of each type.  Choose
max count.

Step 2:
 SQL> SELECT spriden_first_name || ' ' ||
          spriden_last_name, spraddr_street_line1,
          spraddr_street_line2,
          spraddr_city || ' ' ||
          spraddr_stat_code || '  ' || spraddr_zip
      FROM spriden, spraddr
     WHERE spriden_pidm = spraddr_pidm
       AND spriden_change_ind IS NULL
       AND spraddr_atyp_code =  'PR';
```

Curriculum/Program Rules

Objectives

At the end of this section, you will be able to describe the forms and tables used in curriculum/program rules functionality.

Curriculum/Program Rules Overview

Introduction

Although Curriculum and Program rules are not a separate module, those tables are introduced now because of their connections to Recruiting, Admissions and General Student.

These rules are not required, but most institutions use them because of CAPP and Web for Students - Admissions.

Objectives

Examine

- Forms used to build rules
- Table relationships

Overview

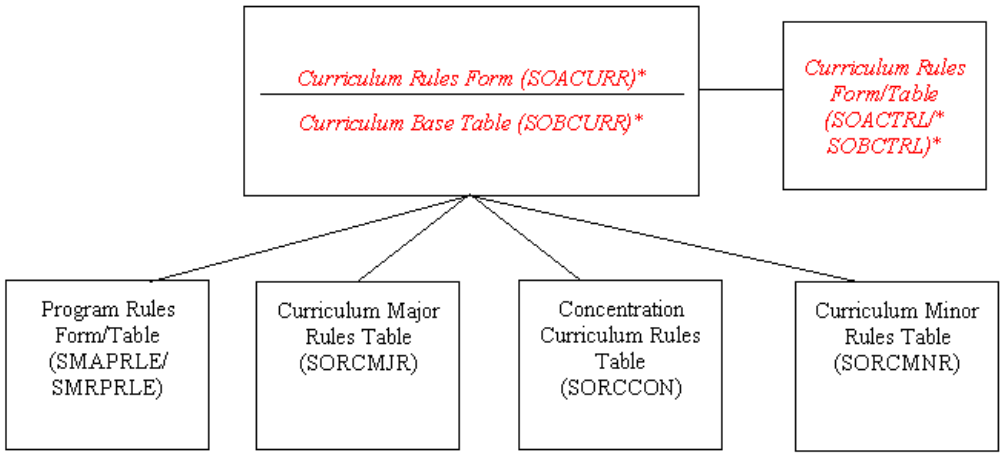
Your functional consultant will go over the setting up of these rules in detail.

The purpose of this lesson is to examine three forms and six tables which should be set up before implementing Recruiting and Admissions. The lesson will illustrate how to discover the underlying tables and point out the relationships among the tables.

The lesson will also illustrate which tables must be populated during conversion if you are going to use curriculum rules.

For more details on setting up and using program and curriculum rules, CAPP training is appropriate. You can look at Chapter 9 of the CAPP user manual for a detailed discussion of Curriculum rules, as well as the Student User Manual, in Chapters 10(Recruiting), 11(Admissions), 12(General Student), 13(Registration) and 15(Academic History).

Diagram



Notice the naming convention:

- SOACURR is an OVERALL form -- used by many modules
- SMAPRLE is part of the CAPP module -- M is the letter for that module

Major forms

- Program Definition Rules Form (SMAPRLE)
- Curriculum Rules Form (SOACURR)
- Curriculum Rules Control Form (SOACTRL)

If your institution is planning to use CAPP, you will be concerned with the SMAPRLE (Program Rules) form. If not, and you do plan to use curriculum rules, you will only need to be concerned with SOACURR and SOACTRL.

Major tables

- Program Definition Rules Table (SMRPRLE)
- Curriculum Rules Form (SOBCURR)
- Curriculum Rules Control Table (SOBCTRL)
- Curriculum Major Rules Table (SORCMJR)
- Curriculum Minor Rules Table (SORCMNR)
- Curriculum Concentration Rules Table (SORCCON)

Major validation tables

- Term Code Validation Form/Table (STVTERM)
- Level Code Validation Form/Table (STVLEVL)
- College Code Validation Form/Table (STVCOLL)
- Degree Code Validation Form/Table (STVDEGC)
- Campus Code Validation Form/Table (STVCAMP)
- Department Code Validation Form/Table (STVDEPT)
- Major, Minor, Concentration Code Validation Form/Table (STVMAJR)

These validation tables must be set up if you use curriculum rules.

Program Definition Rules Form (SMAPRLE)

SMAPRLE

SMRPRLE is the underlying table.

Program is required only if CAPP's Program Planning indicator is set to 'Yes' in SOACTRL.

- sobctrl_program_ind = 'Y'
- Part of CAPP module

Program is not required unless you are using CAPP and/or unless you set CAPP's Program Planning Indicator to 'Y' on SOACTRL.

When program is used on a curriculum rule, the following must match on SOACURR what is defined in SMAPRLE:

- Level
- Campus
- College
- Degree

Curriculum Rules Form (SOACURR)

SOACURR

SOBCURR is the underlying table.

- Used to view or create curriculum rules
- Rules are based on Program Definitions if you are using program rules; otherwise, program is not a required field

Note: The key block for SOACURR uses term, which is optional. If you put the term in the key, the form only shows you the rules which are valid for that term; no future term rules are displayed.

Note: When program is used on a rule, the level, campus, college, and degree have to match what has been defined on SMAPRLE. If the campus on SMAPRLE is blank, all campuses are valid for the rule. The information defaults back into SOACURR from the List of Values window for SMAPRLE.

Curriculum Rules Control Form (SOACTRL)

SOACTRL

SOBCTRL is the underlying table.

- Indicators determine if/how various areas related to curriculum are used
- Can set “Use CAPP’s Program Planning” to ‘Y’ or ‘N’
- Indicators set severity level of error checking by module if curriculum rules are used

Major, Minor, Concentration Rules Forms

Major, Minor, Concentration

- Curriculum Major Rules Form (SORCMJR)
- Curriculum Minor Rules Form (SORCMNR)
- Curriculum Concentration Rules Form (SORCCON)

Each table contains on/off indicators for each module using curriculum rules.

e.g. Admissions: sorcmjr_adm_ind = 'Y'

The data from these tables shows up through SOACURR.

Conversion Issues

Issues

- Will your users build curriculum rules?
- If so, then can you use the rules to your advantage when converting student data?
- Can you use the student's major (on legacy side) to get the valid department and program codes from SOBCURR and SORCMJR?

If you convert the legacy major codes to match Banner major codes in STVMAJR, then you can run a query which will use curriculum rules to give you the valid department and program.

You can use the converse of this to determine which records on your legacy system will have an invalid major when converted to Banner.

Summary

Summary

- Build rules in SOACURR
- All curriculum rules must be built before setting indicators in SOACTRL
- Build Program Rules on SMAPRLE (if you plan to use CAPP's Program Planning)
- Build control rules in SOACTRL
  - if sobctrl_curr_rule_ind = 'Y', then sobctrl_program_ind must = 'Y'. This means that you are using CAPP's Program Planning.
  - This indicator means that major curriculum rules are "turned on" for STUDENT: sorcmjr_stu_ind = 'Y
- Build control rules in SOACTRL
  - if sobctrl_curr_rule_ind = 'N' in SOACTRL then sobctrl_program_ind can = 'Y'
  - This means that you **are not** using CAPP's Program Planning, but you **are** using curriculum rules

Self Check – Curriculum/Program Rules Exercises

Exercise 1

Write a query to retrieve curriculum rules that apply to STUDENT, listing:

- major and program
- department code
- level code
- college code
- campus code
- degree code

Exercise 2

Write a query to retrieve a list of students who have an invalid major based on the curriculum rules, selecting:

- id
- last name
- college code
- degree code
- major code

(This is an advanced exercise.)

Self Check – Curriculum/Program Rules Exercises – Answer Key

Exercise 1

Write a query to retrieve curriculum rules that apply to STUDENT, listing:

- major and program
- department code
- level code
- college code
- campus code
- degree code

```
select sorcmjr_majr_code, sobcurr_program,
       sorcmjr_dept_code, sobcurr_levl_code,
       sobcurr_coll_code, sobcurr_camp_code,
       sobcurr_degc_code
  from sobcurr, sorcmjr
 where sobcurr_curr_rule = sorcmjr_curr_rule
   and sorcmjr_stu_ind = 'Y';
```

Exercise 2

Write a query to retrieve a list of students who have an invalid major based on the curriculum rules, selecting:

- id
- last name
- college code
- degree code
- major code

(This is an advanced exercise.)

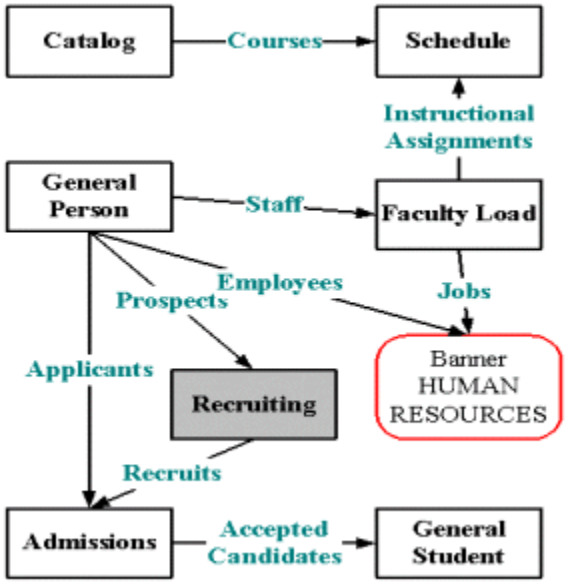
```
select spriden_id, spriden_last_name,
       sgbstdn_coll_code_1, sgbstdn_degc_code_1,
       sgbstdn_majr_code_1
  from spriden, sgbstdn
 where spriden_pidm = sgbstdn_pidm
   and not exists (select 'x'
                     from sorcmjr, sobcurr
                    where sobcurr_curr_rule =
                          sorcmjr_curr_rule
                      and sorcmjr_majr_code =
                          sgbstdn_majr_code_1
                      and sobcurr_coll_code =
                          sgbstdn_coll_code_1
                      and sobcurr_degc_code =
                          sgbstdn_degc_code_1);
```

Recruiting

Objectives

At the end of this section, you will be able to describe the role and functions of the Recruiting module.

Diagram



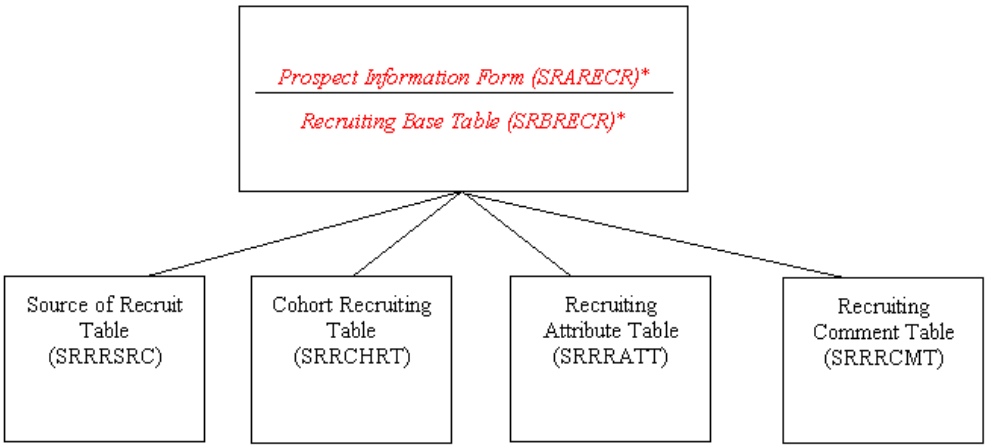
This section covers the Recruiting module. If it is implemented, it would be best to follow this order, working on Recruitment after Catalog, General Person and Curriculum Rules.

Objectives

Examine

- Major & Required Forms and Tables
- Reports, Processes and Procedures
- Conversion of Data

Diagram



Only one table is required for conversion, if you choose to convert (if you do, you must also have appropriate validation tables set up).

Major forms and tables

Major Form:

- Prospect Application Form (SRARECR)

Major Tables:

- Recruiting Base Table (SRBRECR)
- Source of Recruit Table (SRRRSRC)
- Cohort Recruiting Table (SRRCHRT)
- Recruiting Attribute Table (SRRRATT)
- Recruiting Comment Table (SRRRCMT)
- Curriculum Rules Tables

Notice patterns in the names of forms and tables on this page.

Major Validation Tables/Forms

- Term Code Validation Form/Table (STVTERM)
- Level Code Validation Form/Table (STVLEVL)
- College Code Validation Form/Table (STVCOLL)
- Degree Code Validation Form/Table (STVDEGC)
- Major, Minor, Concentration Code Validation Form/Table (STVMAJR)
- Student Type Validation Form/Table (STVSTYP)
- Residence Code Validation Form/Table (STVRESD)

Prospect Information Form (SRARECR)

SRARECR

This form provides information necessary for all recruitment related activities, and is the basis for all related recruiting forms.

- Can go to SPAIDEN form to create a person record from this form
- Notice connections to Curriculum

Quick Recruit Form (SRAQUIK)

SRAQUIK

This form allows entry of new prospective students.

General Person information is created via this form (populating tables: SPRIDEN, SPBPERS, SPRADDR, etc.), along with other information (populating tables: SORHSCH, SORPCOL, SORINTS, SRRRSRC, SORCONT etc.)

Note: This form allows direct creation of a person record (you don't go to SPAIDEN--the form does that in the background).

Questions

What tables are part of Recruiting Module?

```
select table_name
  from all_tables
 where table_name like 'SR%'
```

What data elements are required?

```
desc srbrecr
```

Notice the "NOT NULL" columns.

What are the key fields in srbrecr?

```
SQL> select column_name
       from all_cons_columns
      where table_name = 'SRBRECR'
        and constraint_name = 'PK_SRBRECR';
```

Describe each table: SRBRECR, SRRRSRC, SRRCHRT, SRRRATT, SRRRCMT

```
SQL> desc srbrecr
SQL> desc srrrsrc
SQL> desc srrchrt
SQL> desc srrratt
SQL> desc srrrcmt
```

Reports

- Recruiting Enrollment Analysis (SRRENRL)
- Recruits Never Applied to Institution Report (SRRINQR)

Other Scripts

$BANNER_HOME/student/dbprocs

functions (srf*)

$BANNER_HOME/student/views

views (srv*): srvrecr0.sql creates view called as_recruiting_data

Some views are used in conjunction with the Object:Access method of retrieving data from database. This method uses the concept of “layered” views; you must have the GTVSDAX form/table populated with crosswalk values.

f_gurmail_rowid in sofmail in student views

For more information about Object:Access views and the GTVSDAX translation form/table, contact your account manager to request the manuals and/or appropriate training.

Conversion Issues

Questions

Will Recruiting data be converted or entered manually by the users?

What Recruiting data do you have in your legacy system?

```
select table_name,comments
from all_tab_comments
where table_name like 'SR%';
```

How do you determine where to put it in Banner?

Will you use curriculum rules?

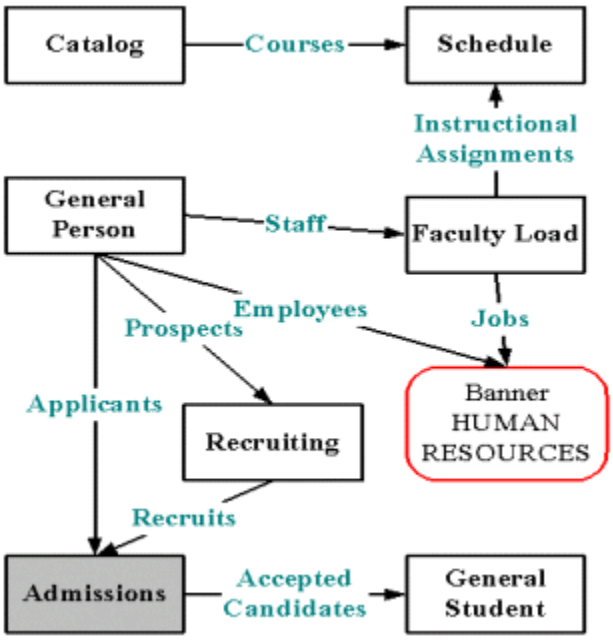
Recruiting Module, if used, is usually brought up first -- and is usually a manual process of setting up validation tables and curriculum rules (if they are to be used with Recruiting). ***Conversion of legacy data is not common.***

Admissions

Objectives

At the end of this section, you will be able to describe the role and functions of the Admissions module.

Diagram

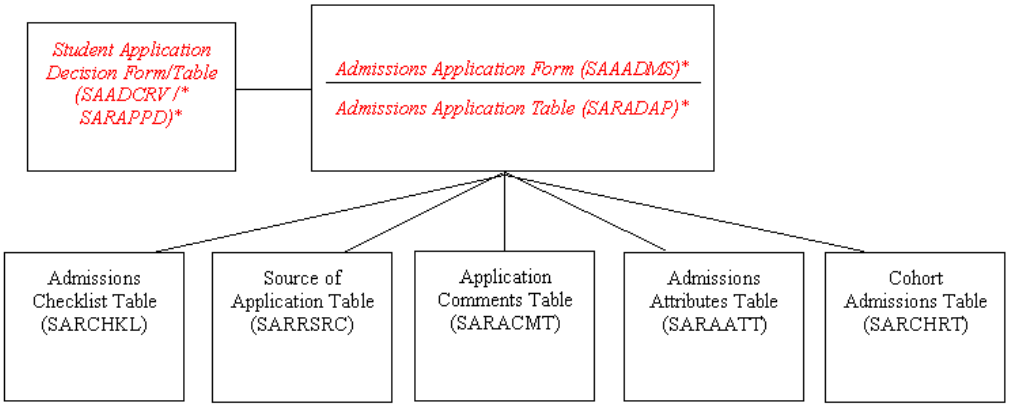


Objectives

Examine/Review

- Major & Required Forms and Tables
- Reports, Processes and Procedures
- Conversion of Data

Diagram



Required tables

The required tables are SARADAP for Admissions application data and SARAPPD for Application decision data.

Major Validation Tables/Forms

- Term Code Validation Form/Table (STVTERM)
- Level Code Validation Form/Table (STVLEVL)
- College Code Validation Form/Table (STVCOLL)
- Degree Code Validation Form/Table (STVDEGC)
- Major, Minor, Concentration Code Validation Form/Table (STVMAJR)
- Student Type Code Validation Form/Table (STVSTYP)
- Residence Code Validation Form/Table (STVRESD)
- Admission Application Status Code Validation Form/Table (STVAPST)
- Admission Application Decision Code Validation Form/Table (STVAPDC)
- Test Code Validation Form/Table (STVTESC)
- Degree Level Code Validation Form/Table (STVDLEV)
- Degree Award Category Code Validation Form/Table (STVACAT)
- State/Province Code Validation Form/Table (STVSTAT)
- Letter Code Validation Form/Table (GTVLETR)
- Paragraph Code Validation Form/Table (GTVPARA)

All of these Validation Tables are necessary for the Admissions Module.

Notice that many of the tables were previously mentioned in preceding modules, particularly in Recruiting.

GTVLETR and GTVPARA are used in Letter Generation. You may want to set these up before bringing up Recruiting if you plan to do that before Admissions and if you plan to send mail to prospects.

New validation tables:

- STVAPST (Admission Application Status Codes)
- STVAPCD (Admission Application Decision Codes)

Admissions Application Form (SAAADMS)

SAAADMS

This form is used for maintaining applications submitted to the institution. It can maintain an unlimited number of applications for any given term (saradap_term_code_entry, saradap_appl_no).

Quick Admit Form (SAAQUIK)

SAAQUIK

This form allows entry and registration of new students with minimal effort.

General Person information is created via this form (populating tables: SPRIDEN, SPBPERS, SPRADDR, SPRTELE, etc.).

Admissions and/or Recruitment records may be created through this form.

Other information can be accessed via this form (tables: SORHSCH, SORPCOL, SPRHOLD, SORTEST, SPRINTL, etc.).

Admissions Decision Form (SAADCRV)

SAADCRV

The underlying table is SARAPPD.

Once an applicant is accepted through SAADCRV, a student record is created (SGASTDN form/SGBSTDN table).

Questions

What tables are part of the Admissions Module?

```
select table_name
  from all_tables
 where table_name like ‘SA%’
```

What data elements are required?

```
desc saradap
```

Notice the “NOT NULL” columns.

What are the key fields in SARADAP?

```
    select column_name
      from all_cons_columns
     where table_name = 'SARADAP'
       and constraint_name = 'PK_SARADAP';

    select table_name, comments
      from all_tab_comments
     where table_name like ‘SA%’;
```

Reports

- Admissions Count by College/Major Report (SARACTM)
    - This report prints admission application count by college/major.
- C program run from Job Submission
- Admissions Application Report (SARADMS)
- Admission Decision Criteria Report (SARDCSN)

Other reports and purge processes are also available for the Admissions module. Refer to Chapter 10 of the Student System Technical Reference Manual for a complete list of reports/processes.

Other Scripts

$BANNER_HOME/student/dbprocs

functions (saf*)

$BANNER_HOME/student/views

views (sav*): savadm0.sql creates as_admissions_applicant

Some views are used in conjunction with the Object:Access method of retrieving data from database. This method uses the concept of “layered” views; you must have the GTVSDAX form/table populated with crosswalk values.

For more information about Object:Access views and the GTVSDAX translation form/table, contact your account manager to request the manuals and/or appropriate training.

Conversion Issues

Questions

Will Admissions data be converted or entered manually by the users?

What Admissions data do you have in your legacy system?

Admissions is typically not converted for going live but may be converted later for Institutional Research purposes.

Mass Entry Admissions / General Student / Graduation Enhancement

Introduction

This enhancement introduces mass entry capability to admissions and general student processing, and enhances the existing graduation mass entry functionality. Each mass entry form has search, update, and results information.

Mass entry processing is based on user-defined search and update criteria and includes curriculum elements where appropriate. Users can select students based on form search criteria and update their data based on the update criteria. The selected students can be reviewed and the updates selectively processed. Updates can be processed immediately or held for later processing in job submission using a new batch process. A new form is used to view processing results for the mass entry forms, whether the results are processed immediately on the mass entry form or via batch.

The mass entry forms retain audit information such as the user ID, date, timestamp, search criteria, update criteria, and the students that were processed. Audit information can be purged using a new process. The mass entry forms can also be used to query student information only, in which case the audit information is not retained.

Admissions Mass Entry

The new Admissions Mass Entry Form (SAAMAPP) is used for mass entry admissions processing. You can search and update admissions application records on SAAMAPP when an admissions application record exists for the student on SAAADMS for the application term and application number.

For more information about this enhancement, please refer to the *Banner 8 Student Release Guide*.

Self Check – Admissions Exercise

Exercise

Write a query to get the id, last name, term of entry and student type for applicants for a specific future term (prompt user for term code). The records returned should be for the most current application for that term and the decision should be the most recent decision made that matches that application.

Self Check – Admissions Exercise – Answer Key

Exercise

Write a query to get the id, last name, term of entry and student type for applicants for a specific future term (prompt user for term code). The records returned should be for the most current application for that term and the decision should be the most recent decision made that matches that application.

```
select spriden_id, substr(spriden_last_name, 1,15),
       saradap_term_code_entry, saradap_styp_code
  from spriden, saradap
 where saradap_term_code_entry = &TERM
   and saradap_pidm in
        (select sarappd_pidm
           from sarappd x
          where sarappd_term_code_entry =
                saradap_term_code_entry
            and sarappd_pidm = saradap_pidm
            and saradap_appl_no = sarappd_appl_no
            and sarappd_seq_no =
                 (select max(sarappd_seq_no)
                    from sarappd
                   where x.sarappd_pidm = sarappd_pidm
                     and x.sarappd_term_code_entry =
                         sarappd_term_code_entry
                     and x.sarappd_appl_no =
                         sarappd_appl_no))
   and spriden_pidm = saradap_pidm
   and spriden_change_ind is null
          order by spriden_last_name
```

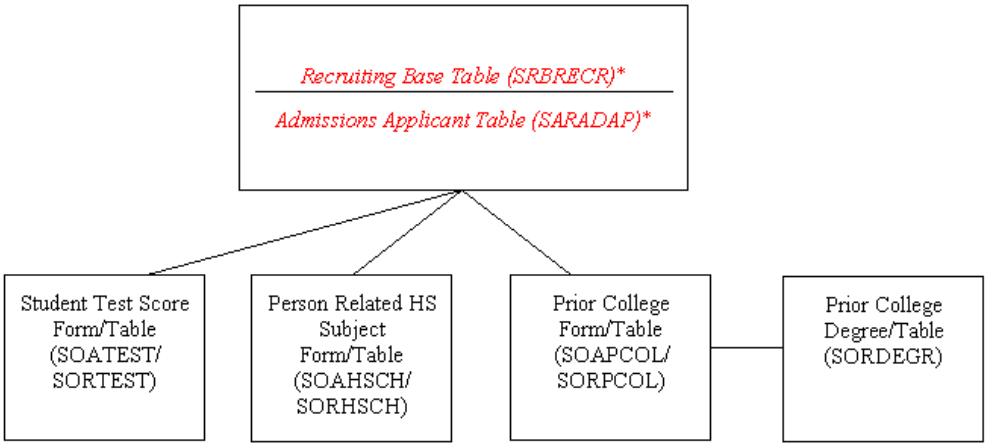
Overall Forms and Tables

Objectives

At the end of this section, you will be able to describe major forms and tables referenced through many areas of Banner.

Overall Forms and Tables

Diagram



Overall tables are not restricted to connections with Recruitment or Admissions, but are referenced through many areas of Banner.

Overall tables are referenced in reporting.

Many other overall forms may be accessed from the General Student Module, through the Educational Background Menu and other menus.

Major forms

- Test Score Information Form (SOATEST)

  Used to maintain test score information

- High School Information Form (SOAHSCH)

  Used with Recruiting and Admissions for high school information

- Prior College Form (SOAPCOL)

  Used with Recruiting, Admissions, and Faculty Load for prior college information

Major tables

- Student Test Score Table (SORTEST)
- Person Related HS Subject Table (SORHSCH)
- Prior College Table (SORPCOL)
- Prior College Degree Table (SORDEGR)

Major Validation Tables/Forms:

- Test Code Validation Form/Table (STVTESC)
- Source/Background Institution Code Validation Form/Table (STVSBGI)
- Degree Code Validation Form (STVDEGC)

You will use STVTESC in the exercise at the end of the lesson.

Questions

What are the tables that are used for multiple modules?

```
select table_name, table_type, comments
  from all_tab_comments
 where table_name like 'SO%'
   and table_type = 'TABLE';
```

Are any data elements required in SORTEST, SORHSCH, SORPCOL?

Examine GUROPTM;

```
select *
  from guroptm
 where guroptm_form_name = 'SOATEST';
```

This will show what forms are related to 'SOATEST' and how they are related, (triggers, etc).

How many overall tables are there, and what is a description of their content?

```
select table_name, table_type, comments
  from all_tab_comments
 where table_name like 'SO%'
   and table_type = 'TABLE';
```

Conversion Issues

Questions

Will Overall data be converted or entered manually by the users?

What Overall data do you have in your legacy system?

How do you determine where to put it in Banner?

Reports/Processes

Interface Tape Load Process (SORTAPE)

Run the SORTAPE process from Job Submission.

This process uses the conversion and default values from SOBCNVT. If the process fails it is possible that a code does not have the appropriate conversion value. One of the parameters of this process allows you to delete the record(s) from the temporary tables as it gets inserted into the Banner table. If you need to rerun SORTAPE because a conversion value is not in SOBCNVT, you may add the value to the form SOTCNVT, then rerun SORTAPE for the remainder of the records still in the temporary tables.

For more information about SORTAPE, refer to Chapter 14 of the Student Technical Reference Manual.

Tape Interface Rules Form (SOAINFR)

Establish rules for each tape type.

Tape Code Conversion Form (SOTCNVT)

- Establish converted values on the Tape Code Conversion Form
- Load the tape to a flat file
- Clean out the temporary tables (run $BH/student/plus/ sostdel.sql)
- Run the SQL*Loader from UNIX prompt
  (sqlldr userid=username/password, control=sat9495.ctl, data=sat9798.dat)

Note: For a good discussion of SOTCNVT, refer to Chapter 16 of the Student Users Manual.

Note: sat9495.ctl should not need to be modified unless the tape layout changes.

Suspended Records Maintenance Form (SOASUSP)

Tape Comparison Processing Report (SORINFR)

Run SORINFR from UNIX prompt to compare data in temporary tables to existing Banner information. SORINFR identifies Matches, New records, or Errors (The source code is located in /u01/banner/test/student/c).

If this process produces any records that have an indicator other than M - Match or N - New, then the records can be viewed and corrected on the Suspended Records Maintenance Form (SOASUSP).

Self Check – Overall Forms and Tables Exercise

Exercise

Get the following information about all applicants for a term (prompt for term):

- Full Name
- Entry Term
- Test Code
- Test Score
- High School GPA

for Students who took either the ACT English or the SAT Verbal tests.

Your query should return only records with values in all the above areas.

Self Check – Overall Forms and Tables Exercise – Answer Key

Exercise

Get the following information about all applicants for a term (prompt for term):

- Full Name
- Entry Term
- Test Code
- Test Score
- High School GPA

for Students who took either the ACT English or the SAT Verbal tests.

Your query should return only records with values in all the above areas.

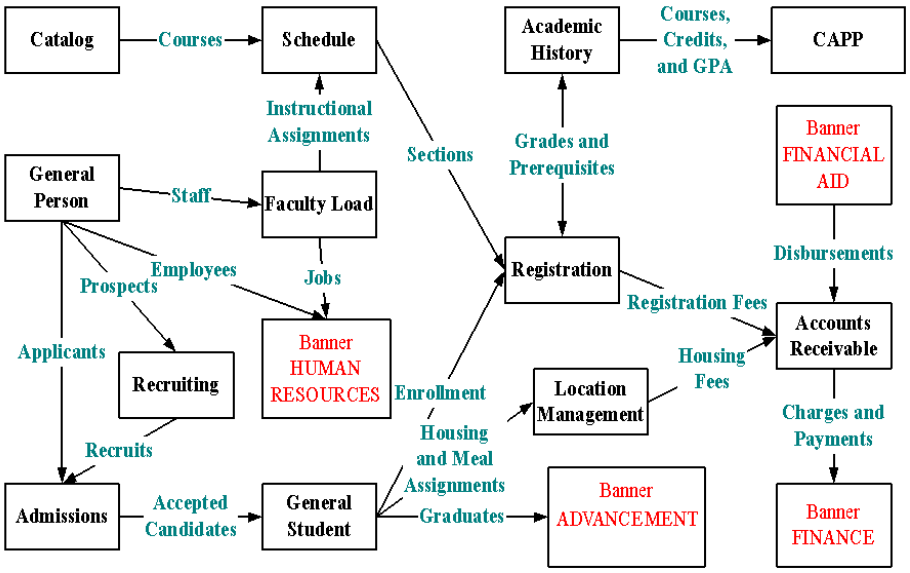
```
Step 1
desc stvtesc
-find SAT Verbal and ACT English code
Step 2
desc sortest
-get proper column names
Step 3
desc sorhsch
-find column name for hs gpa
Step 4

select  spriden_id, substr(spriden_last_name, 1,15)
       || ', ' ||  substr(spriden_first_name,1.15),
        saradap_term_code_entry, sortest_tesc_code,
        sortest_test_score, sorhsch_gpa
  from    spriden, saradap, sortest, sorhsch
 where    sorhsch_pidm = saradap_pidm
   and  saradap_term_code_entry = '&term'
   and  sorhsch_pidm = sortest_pidm
   and  sortest_tesc_code IN ('S01', 'A01')
   and  sorhsch_pidm = spriden_pidm
   and  spriden_change_ind is null
   and    sorhsch_gpa is not null
 order by spriden_last_name;
```

Faculty Load

Objectives

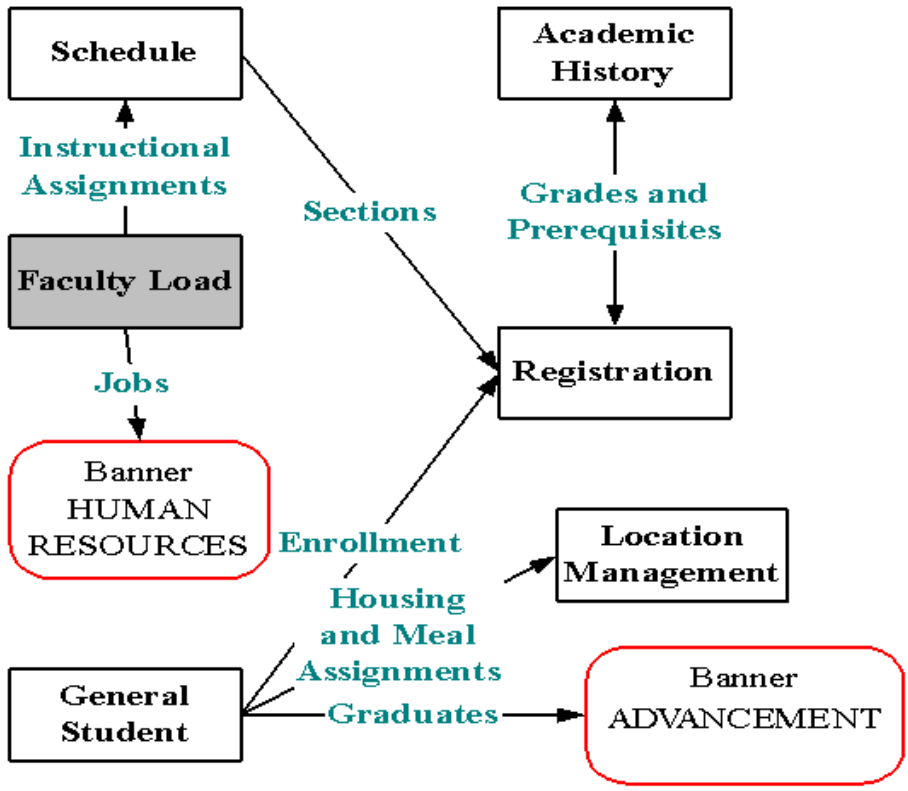
At the end of this section, you will be able to describe the role and functions of the Faculty Load module.

Diagram


Catalog
Courses
Schedule
Academic History
Courses, Credits, and GPA
CAPP
Instructional Assignments
Sections
Grades and Prerequisites
Banner FINANCIAL AID
General Person
Staff
Faculty Load
Registration
Disbursements
Employees
Prospects
Jobs
Registration Fees
Accounts Receivable
Applicants
Banner HUMAN RESOURCES
Housing Fees
Recruiting
Enrollment
Location Management
Charges and Payments
Housing and Meal Assignments
Recruits
Admissions
Accepted Candidates
General Student
Graduates
Banner ADVANCEMENT
Banner FINANCE

Faculty Load Module

Diagram



Overview

Faculty Load enables users to enter and maintain information including instructional and non-instructional assignments for a faculty member or advisor.

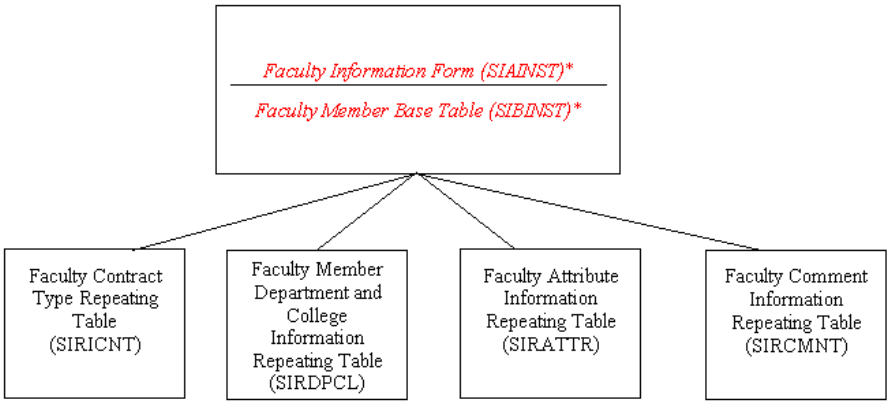
Personnel information, such as tenure status and sabbatical dates, is maintained in this module along with workload and contract information.

Faculty MUST have a SPRIDEN record (etc.) before they can be designated as Faculty (Advisor or Instructor).

A person must be flagged as an “instructor” in the SIBINST table (SIAINST form) before he/she can be assigned an instructional section in SCHEDULE.

Faculty Load

Forms and tables



Faculty Load is a “swing” module, which may be shared between HR and Student. Decisions need to be made about ownership/responsibility of maintenance.

- SIBINST is the only required table.
- SIRASGN is populated when the schedule is done

Major Validation Tables/Forms

- Faculty Status Code Validation Form/Table (STVFCST)
    - STVFCST is the Faculty Status validation table; it is required because it is used in SIBINST.
- Faculty Category Code Validation Form/Table (STVFCTG)
- Faculty Staff Type Code Validation Form/Table (STVFSTP)
- Faculty Contract Type Code Validation Form/Table (STVFCNT)
- Term Workload Rules Code Validation Form/Table (STVWKLD)
- Contract Rules Validation Form/Table (STVCNTR)

Faculty Information Form (SIAINST) / Faculty Member Base Table (SIBINST)

SIAINST / SIBINST

This form and table are used to maintain Faculty Information.

Codes and Indicators for:

- Active/Inactive (sibinst_fcst_code)
- Instructor (sibinst_schd_ind)
- Advisor (sibinst_advr_ind)

SIAINST also utilizes these tables (but data is not required in SIBINST):

- Faculty Contract Type Repeating Table (SIRICNT)
- Faculty Member Department and College Information Repeating Table (SIRDPCL)
- Faculty Attribute Information Repeating Table (SIRATTR)
- Faculty Comment Information Repeating Table (SIRCMNT)

The Prior College Degree Table (SORDEGR) is used in the Faculty Degree Information Form (SIAFDEG) form to maintain faculty degree information.

Faculty Assignment Form (SIAASGN) / Faculty Assignment Table (SIRASGN)

SIAASGN / SIRASGN

This form and table contain faculty teaching assignments for a particular term. It is populated automatically when a faculty member is entered on the SSASECT form in the schedule module, if records exist in SIBINST (faculty status).

Parts of SIAASGN are updated automatically when faculty information is entered in the SSASECT form. The **Assignment Type** field IS NOT updated and must be updated manually.

After building sections in SSASECT/SSBSECT, assignment information will be present in SIRASGN.

SIRASGN is a good table to use for faculty load reports. You will need to include SIRASGN in schedule reports to get faculty pidms in connection with class assignments.

Questions

What tables are part of the Faculty Load Module?

```
select table_name
  from all_tables
 where table_name like 'SI%'
```

What data elements are required?

```
desc sibinst
```

Notice the "NOT NULL" columns.

What are the key fields in sibinst?

```
    select column_name
      from all_cons_columns
     where table_name = 'SIBINST'
       and constraint_name = 'PK_SIBINST';
```

Warning: SIBINST_ADVR_IND MUST be filled in if you want to use faculty as advisors when you get to General Student, even though it is not required by the table.

Reports and processes

- Faculty Load Purge (SIPASGN)
- Faculty Schedule Report (SIRASGQ)
- Faculty Load Contract Analysis Report (SIRCTAL)
- Faculty Load Term Analysis Report (SIRTRAL)

Refer to the Student Technical Reference Manual, Chapter 10, for additional information on Student Module reports and processes.

Don't forget that the Person Directory Process (SPRPDIR) can generate the directory information, including for faculty.

Other Scripts

$BANNER_HOME/student/dbprocs

functions (sif*)

$BANNER_HOME/student/views

views (siv*)

Some views are used in conjunction with Object:Access method of retrieving data from database, using the concept of “layered” views; you must have the GTVSDAX form/table populated with crosswalk values.

Clients should know the naming conventions and the locations of these other database object creation scripts. To use them as models, create your own MODS directory (as discussed earlier in this course) and put any modifications in there.

For more information about Object:Access views and the GTVSDAX translation form/table, contact your account manager to request the manuals and/or appropriate training.

Conversion Issues

Questions

Will Faculty Load data be converted or entered manually by the users?

What Faculty Load data do you have in your legacy system?

How do you determine where to put it in Banner?

When we talk about SGBSTDN (Student record), we will see that the advisor pidm is stored in this table. To ensure that the student's advisor will appear in the form, the advisor must be active for that term and "flagged" as an adviser (sibinst_advr_ind).

Automated Faculty Load and Compensation

Introduction

The new Automated Faculty Load and Compensation module merges faculty information in Banner Student and Human Resources systems to capitalize and deliver a robust, contiguous, and a comprehensive business process that gives institutions the power to automate the derivation and calculation of appropriate compensation packages for their full-time or part-time employed faculty members based on their individual work loads.

Using this module, you can now define rules for calculation of compensation packages in Banner Human Resources and Banner Student, and evaluate work loads and actual compensation packages for full-time as well as part-time faculty members in the module's new web interface on Employee Self-Service.

Requirements

At a minimum, the implementation of Automated Faculty Load and Compensation module requires the following Banner products:

- Banner Student
- Banner Human Resources
- Employee Self-Service
- Banner WebTailor

New forms

- Course Labor Distribution Form (SCACLBD)

  This form is used to build and maintain job labor distribution data at the course catalog level for adjunct faculty assignments. This information can be used for scheduling as well on SSACLBD. (Labor distribution data is entered in Banner Human Resources.)

- Schedule Labor Distribution Form (SSACLBD)

  This form is used to build and maintain job labor distribution data at the section level (CRN) for adjunct faculty assignments. (Labor distribution data is entered in Banner Human Resources.)

Changed forms

- Schedule Form (SSASECT)

  Two new items have been added to the Options Menu to access the new forms.

  - The Course Labor Distribution [SCACLBD] option is enabled in the Key Block and the Instructor block.

  - The Schedule Labor Distribution [SSACLBD] option is enabled in the Key Block and all other blocks.

- Faculty Assignment Form (SIAASGN)

  This form has been modified for this enhancement. Instructional and non-instructional data elements on the form are used with the new Banner Human Resources processing to build the faculty assignment record and track compensation based on term start and end dates.

Changed Reports and Processes

- Term Roll Report (SSRROLL)

  This report has been modified to roll the labor distribution FOAPAL information from SSACLBD/SSRCLBD for the section/CRN to the new term.

- Schedule Purge (SSPSCHD)

  This process has been modified to delete the labor distribution FOAPAL data from SSACLBD/SSRCLBD for the selected term.

For more information regarding this new module and related changes, please refer to the *Banner 8 Human Resources Release Guide* and *Banner 8 Student Release Guide*.

Self Check – Faculty Load Exercise

Exercise

Write a query which would return the full name, id, faculty status and effective term for that status for an instructor.

Self Check – Faculty Load Exercise – Answer Key

Exercise

Write a query which would return the full name, id, faculty status and effective term for that status for an instructor.

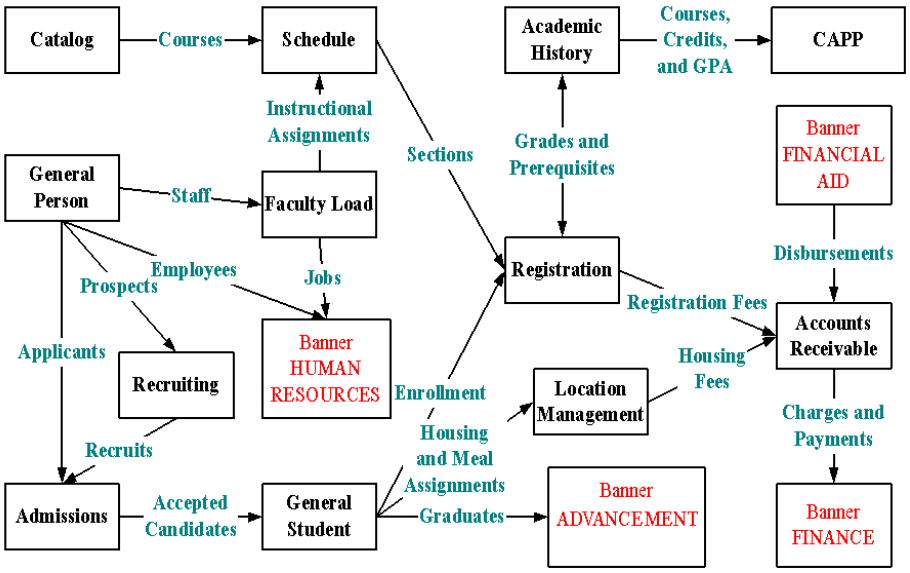
```
select substr(spriden_last_name,1,15) || ', ' ||
       substr(spriden_first_name,1,15), spriden_id,
       sibinst_term_code_eff, sibinst_fcst_code
  from spriden, sibinst
 where sibinst_pidm = spriden_pidm
   and spriden_change_ind is null
 order by spriden_last_name
```

Location Management

Objectives

At the end of this section, you will be able to describe the role and functions of the Location Management module.

Diagram


Catalog
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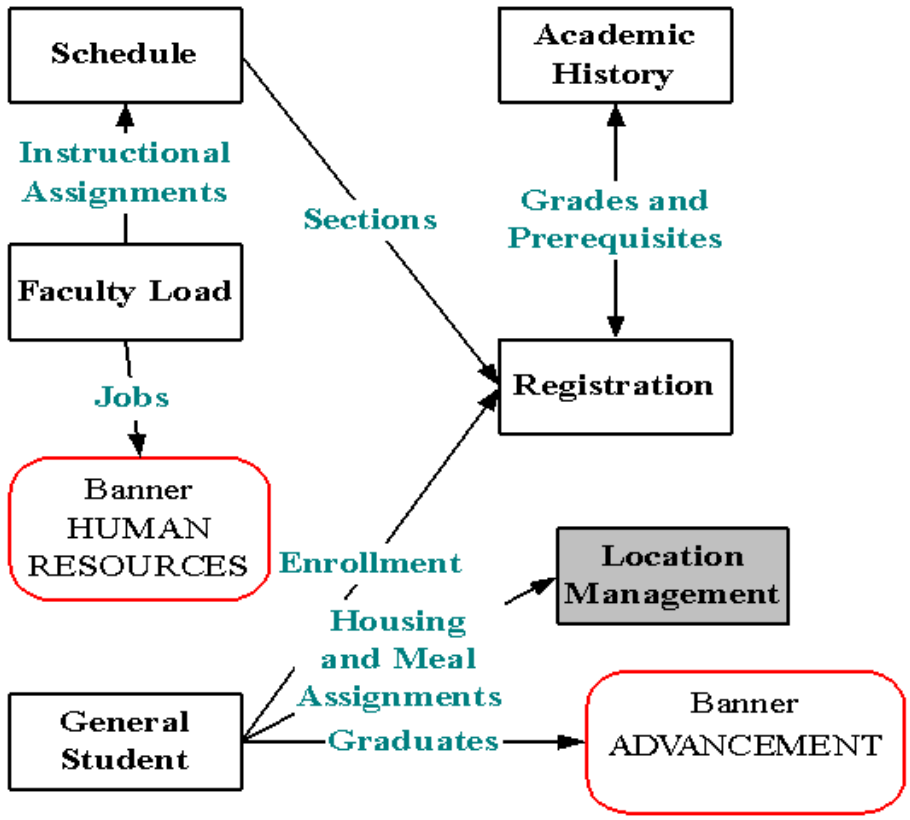
Instructional Assignments
Sections
Grades and Prerequisites
Banner FINANCIAL AID
General Person
Staff
Faculty Load
Registration
Disbursements
Employees
Prospects
Jobs
Registration Fees
Accounts Receivable
Applicants
Banner HUMAN RESOURCES
Housing Fees
Recruiting
Enrollment
Location Management
Charges and Payments
Housing and Meal Assignments
Recruits
Admissions
Accepted Candidates
General Student
Graduates
Banner ADVANCEMENT
Banner FINANCE

Location Management Module

Diagram



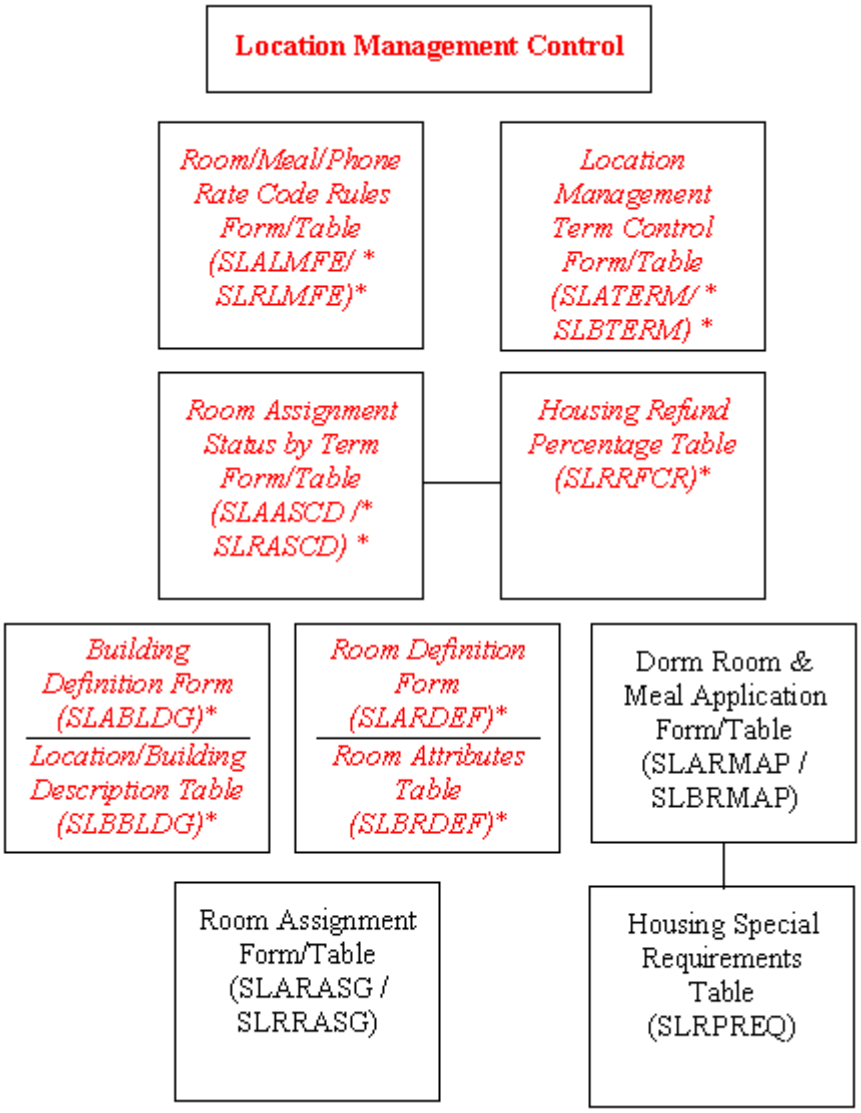
Objectives

Examine/Review

- Major & Required Forms and Tables
- Reports, Processes and Procedures
- Conversion of Data

Overview

- Allows for the definition of the institution's building and room facilities
- Provides a means of assigning rooms for special events
- Provides a listing of available rooms with attributes
- Maintains dormitory, meal plan, phone assignments and assessments



SLBBLDG and SLRRDEF are required for scheduling. If you are a residential institution, you will need to populate SLBRMAP and SLRRASG as well.

Major forms and tables

- Building Definition Form (SLABLDG)

  Table = SLBBLDG

- Room Definition Form (SLARDEF)

  Table = SLBRDEF

If your institution is residential:

- Dorm Room & Meal Application Form/Table (SLARMAP/SLBRMAP)
- Room Application Form/Table (SLARASG/SLRRASG)

Major Validation Tables/Forms

- STVBLDG STVCAMP
- STVRRCD STVHAPS
- STVARTP STVTERM
- STVASCD TTVDCAT
- TTVTAXT (for Canadian use only)
- TBBDETC must also be populated for those making residence hall assignments.

AR table TBBDETC must be set up for residential institutions before they can assign residence hall rooms.

Questions

What tables are part of the Location Management Module?

```
select table_name
  from all_tables
 where table_name like 'SL%'
```

What data elements are required?

```
desc slbrdef
```

Notice the "NOT NULL" columns.

What are the key fields in SLBRDEF?

```
    select column_name
      from all_cons_columns
     where table_name = 'SLBRDEF'
       and constraint_name = 'PK_SLBRDEF';
```

Fields of note

- slrrasg_assess_needed
  This field identifies whether fee assessment is needed for the room assignment. SLRFASM FEE ASSESSMENT PROCESS looks at that field to determine which records should be assessed fees.

- slrrasg_ar_ind
  This field identifies whether the room assignment charges have been processed.
  SLFRASM updates this field when fees have been assessed.

Reports and processes

- Batch Room, Meal and Phone Assessment Process (SLRFASM)
  - selects records based on slrrasg_assess_needed
  - updates slrrasg_ar_ind in records that were assessed
- Active Housing Assignments Report (SLRHLST)
- Room Assignment Roll Process (SLRROLL) -- Roll like terms -- fall to fall, etc.

Other Scripts

$BANNER_HOME/student/dbprocs

functions (slf*)

$BANNER_HOME/student/views

views (slv*): slvres0.sql creates view as_residential_life

Some views are used in conjunction with Object:Access method of retrieving data from database, using the concept of “layered” views; you must have the GTVSDAX form/table populated with crosswalk values.

Clients should know the naming conventions and the locations of these other database object creation scripts. To use them as models, create your own MODS directory (as discussed earlier in this course) and put any modifications in there.

For more information about Object:Access views and the GTVSDAX translation form/table, contact your account manager to request the manuals and/or appropriate training.

Conversion Issues

Questions

Will your institution convert or manually enter Location Management information?

What Location Management data do you have in your legacy system?

How do you determine where to put it in Banner?

Self Check – Location Management Exercise

Exercise

Write a simple report that will show the residence hall assignments for a term (prompt the user for the term). On the report, show last name, id, term, building description and room.

Self Check – Location Management Exercise – Answer Key

Exercise

Write a simple report that will show the residence hall assignments for a term (prompt the user for the term). On the report, show last name, id, term, building description and room.

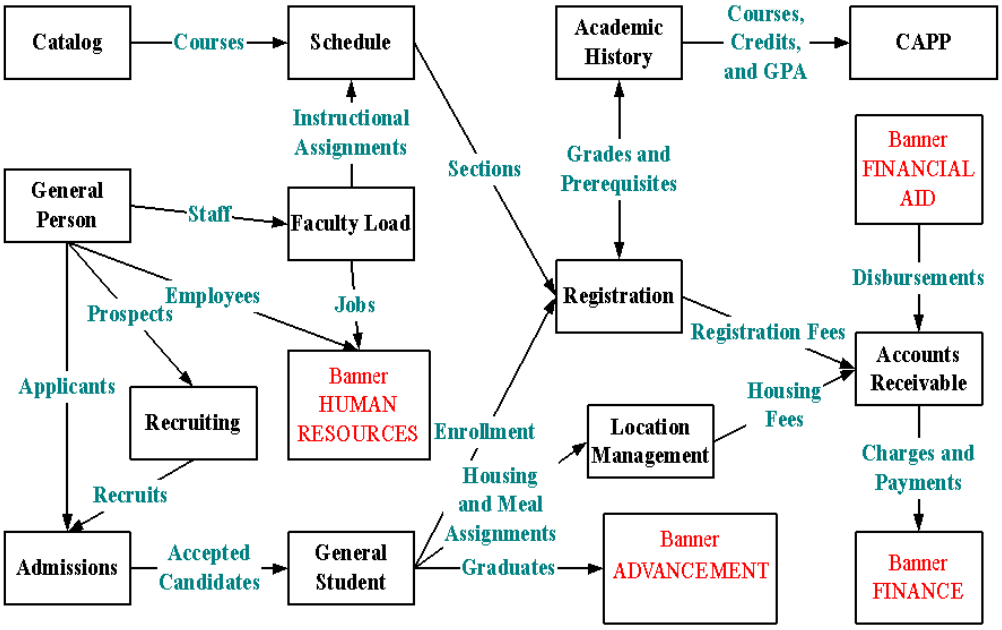
```
SELECT  substr(spriden_last_name,1,10),
        spriden_id, stvbldg_desc,
        slrrasg_room_number, slrrasg_term_code
  FROM  spriden, stvbldg, slrrasg
 WHERE  spriden_pidm = slrrasg_pidm
   AND  spriden_change_ind IS NULL
   AND  slrrasg_bldg_code = stvbldg_code
   AND  slrrasg_term_code = '&term';
```

Schedule

Objectives

At the end of this section, you will be able to describe the role and functions of the Schedule module.

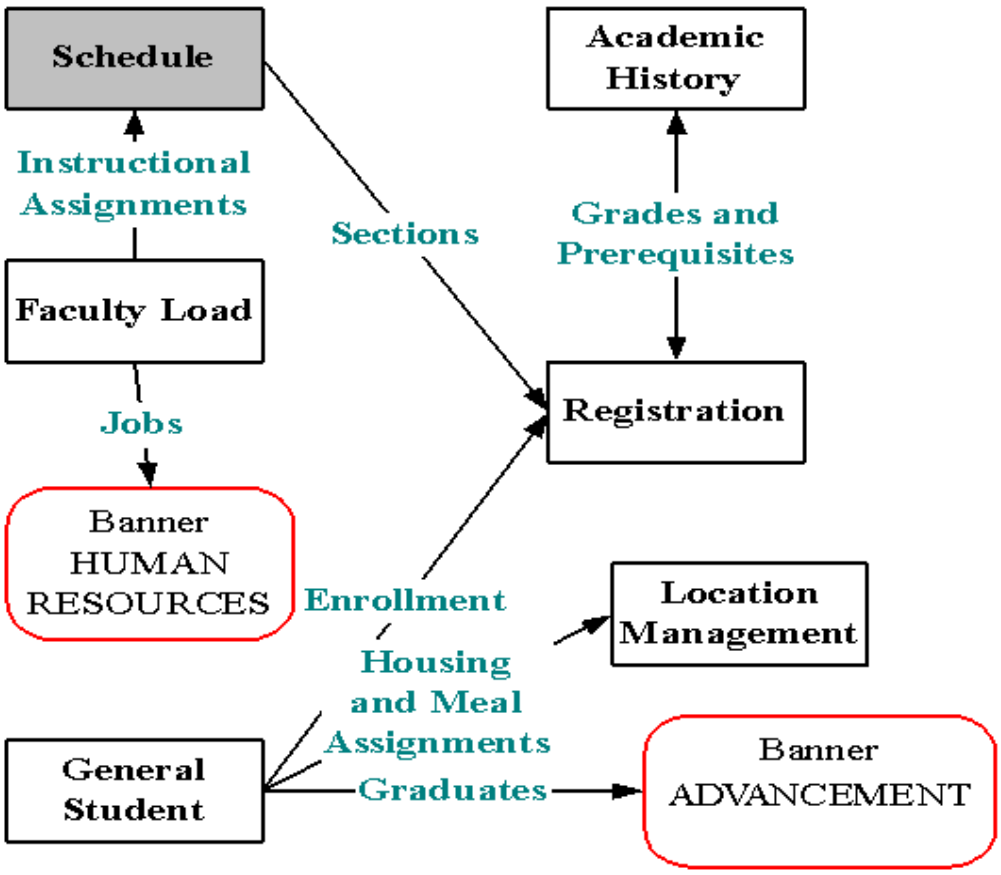
Diagram



Note the relationship of the Schedule module to the entire Banner System.

Catalog, General Person, Faculty Load, Location Management and validation tables must be set up before using Schedule.

Diagram



At this point, Catalog has been built, buildings and rooms have been defined, and Faculty are active and available for scheduling in sections. Also, terms (SOATERM) have been defined.

Objectives

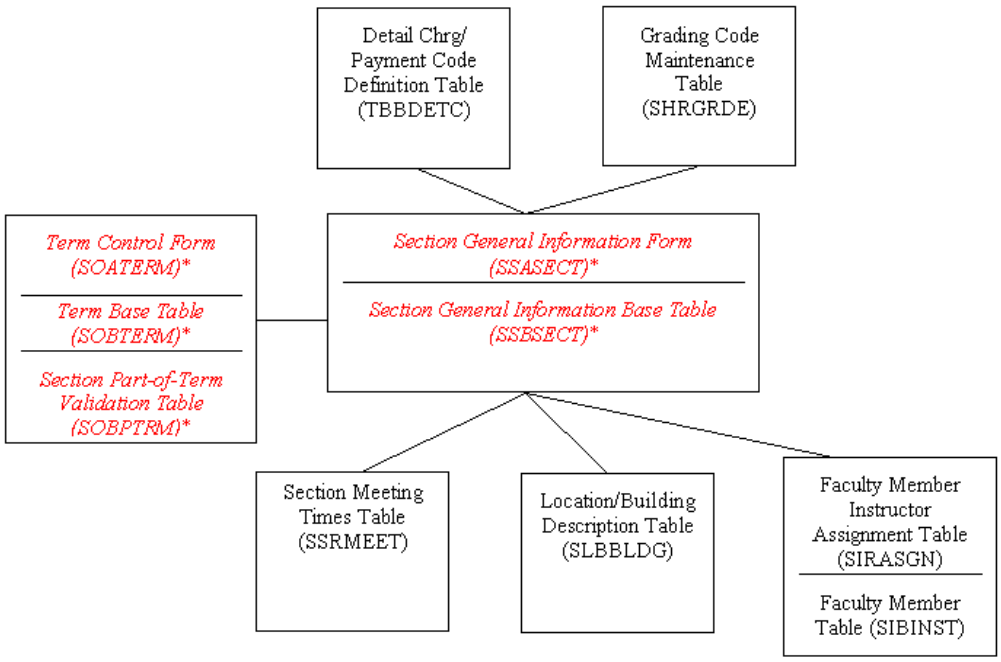
Examine/Review

- Major & Required Forms and Tables
- Reports, Processes and Procedures
- Conversion of Data

Overview

- Build and print a schedule of classes, including term attributes such as date, for each session within a term
- Establish course reference numbers
- Assign instructors to classes
- Schedule classes in rooms
- Allow users to roll the schedule forward to next applicable term to decrease the data entry process

Diagram



Section General Information Form (SSASECT) /Section General Information Base Table (SSBSECT)

Purpose

- Used to build and maintain schedule of classes
- Much of the data defaults from Course Catalog (SCBCRSE, etc)
- Connections with AR module through billing hours, tuition waivers

Term Control Form (SOATERM)

Purpose

- Related tables: Term Control Table (SOBTERM) and Section Part-of-Term Validation Table (SOBPTRM)
- Used to set up controls for each term's schedule, registration, and fee assessment

CRN oneup

Before building the Schedule for a term, a beginning CRN must be set (CRN Oneup).

There are more details about SOATERM and the underlying tables (SOBTERM and SOBPTRM) in the Registration chapter.

Major Validation Tables/Forms

- Term Code Validation Form/Table (STVTERM)
- Level Code Validation Form/Table (STVLEVL)
- Part of Term Code Validation Form/Table (STVPTRM)
- Campus Code Validation Form/Table (STVCAMP)
- Section Status Code Validation Form/Table (STVSSTS)
- Schedule Type Code Validation Form/Table (STVSCHD)
- Subject Code Validation Form/Table (STVSUBJ)
- Grading Mode Code Validation Form/Table (STVGMOD)
- Day of Week Code Validation Form/Table (STVDAYS)
- Detail Charge/Payment Code Definition Table (TBBDETC)

TBBDETC must be set up if you populate SSRFEES table through the SSADETL form, which is not required.

Other Forms/Tables

- Section Meeting Times Table (SSRMEET)
- Location/Building Description Table (SLBBLDG)
- Faculty Information Form/Table (SIAINST/SIBINST)
- Faculty Assignment Form/Table (SIAASGN/SIRASGN)

SSASECT uses SSRMEET table to store meeting times and buildings (SSRMEET_BLDG_CODE). Building information is built in the SLABLDG form, and faculty information is built in SIAINST and SIAASGN forms.

SLQMEET and SSAMATX

SLQMEET

Available Classroom Query Form (SLQMEET)

- Only accessible through SSASECT

SSAMATX

Building/Room Schedule Form (SSAMATX)

- Accessible through menu, direct access, other form (SSASECT)

Questions

What tables are part of the Schedule Module?

```
select table_name
  from all_tables
 where table_name like 'SS%'
```

What data elements are required?

```
desc ssbsect
```

Notice the "NOT NULL" columns.

What are the key fields in ssbsect?

```
    select column_name
      from all_cons_columns
     where table_name = 'SSBSECT'
       and constraint_name = 'PK_SSBSECT';
```

Reports and processes

- Schedule Purge Process (SSPSCHD)
- Term Roll Process (SSRROLL) -- Roll like terms -- Fall to Fall
- Class Schedule Report (SSRSECT)
- Scheduled Section Tally (SSRTALY)

Rolling of Room Assignments should be of “like” terms -- fall to fall, spring to spring, etc.

See Student Technical Reference Manual, Chapter 10, for additional information on Student Module reports and processes.

Other Scripts

$BANNER_HOME/student/dbprocs

functions (ssf*)

$BANNER_HOME/student/views

views (ssv*): ssvsec0.sql creates view as_catalog_schedule

Some views are used in conjunction with Object:Access method of retrieving data from database, using the concept of “layered” views; you must have the GTVSDAX form/table populated with crosswalk values.

Clients should know the naming conventions and the locations of these other database object creation scripts. To use them as models, create your own MODS directory (as discussed earlier in this course) and put any modifications in there.

For more information about Object:Access views and the GTVSDAX translation form/table, contact your account manager to request the manuals and/or appropriate training.

Conversion Issues

Questions

Will Schedule data be converted or entered manually by the users?

What Schedule data do you have in your legacy system?

How do you determine where to put it in Banner?

Note: It is generally not recommended to convert a schedule, but to enter it manually instead.

Schedule creation

After Catalog data is entered or converted, the Schedule can be created.

If it is decided that conversion of legacy data is required, it may be advisable to manually enter several courses into SSASECT to ensure that all of the Catalog data that should "default" to the sections does so properly.

Self Check – Schedule Exercise

Exercise

Write a query that returns full name, id, crn, subject code, course number, section number, course title and term code for all faculty members teaching any English course. Prompt the user for the term.

Self Check – Schedule Exercise – Answer Key

Exercise

Write a query that returns full name, id, crn, subject code, course number, section number, course title and term code for all faculty members teaching any English course. Prompt the user for the term.

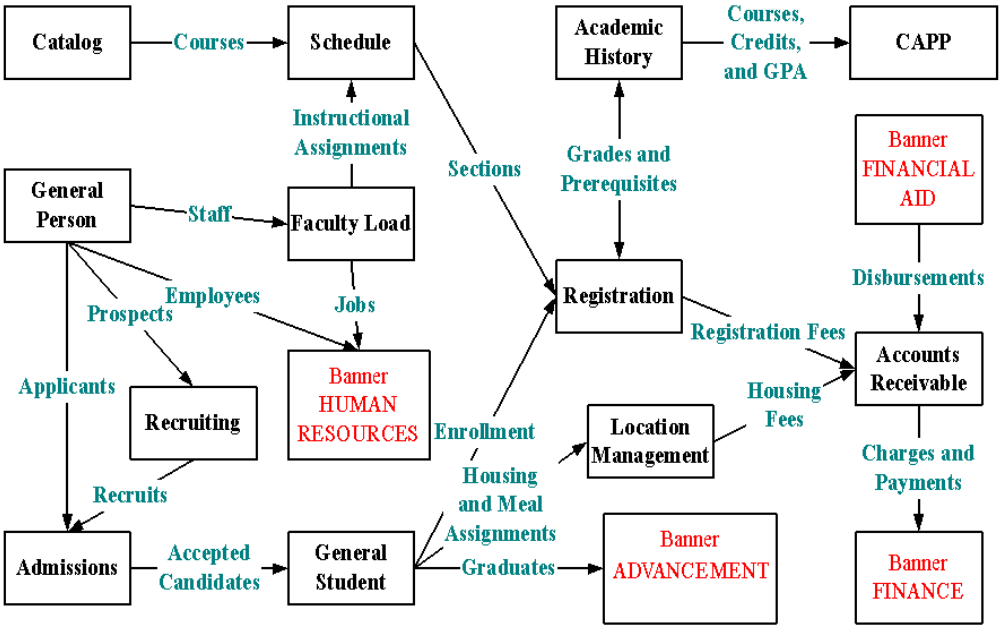
```
select  substr(spriden_last_name, 1,15) ||  ', ' ||
          substr(spriden_first_name,1,15),
        spriden_id, ssbsect_crn, ssbsect_subj_code,
        ssbsect_crse_numb, a.scbcrse_title,
        ssbsect_seq_numb, a.scbcrse_eff_term,
        ssbsect_term_code
 from   spriden, ssbsect, scbcrse a, sirasgn
where   sirasgn_pidm = spriden_pidm
  and   spriden_change_ind is null
  and   sirasgn_crn = ssbsect_crn
  and   sirasgn_term_code = ssbsect_term_code
  and   ssbsect_subj_code = 'ENGL'
  and   ssbsect_term_code = '&term'
  and   ssbsect_subj_code = a.scbcrse_subj_code
  and   ssbsect_crse_numb = a.scbcrse_crse_numb
  and   a.scbcrse_eff_term =
       (select    max(b.scbcrse_eff_term)
                from    scbcrse b
             where      b.scbcrse_subj_code =
                        ssbsect_subj_code
            and     b.scbcrse_crse_numb =
                        ssbsect_crse_numb
               and      b.scbcrse_eff_term <=
                        ssbsect_term_code);
```

General Student

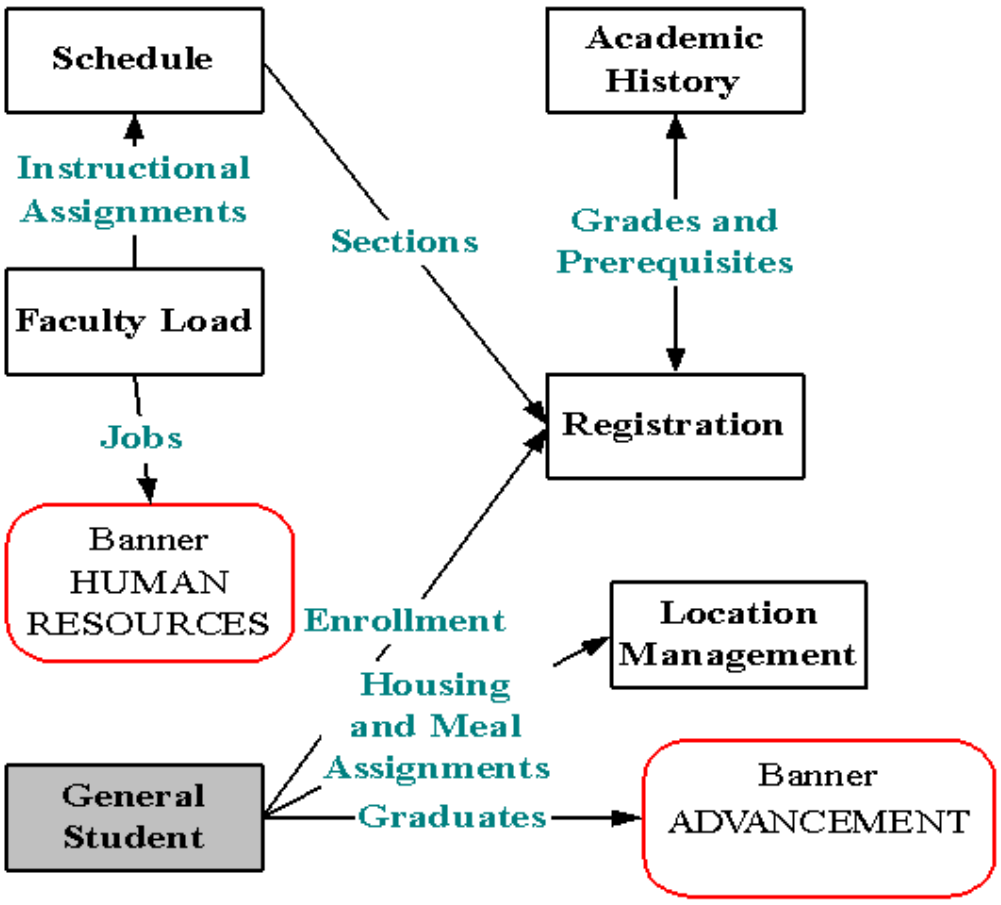
Objectives

At the end of this section, you will be able to describe the role and functions of the General Student module.

Diagram


Catalog
Courses
Schedule
Academic History
Courses, Credits, and GPA
CAPP
Instructional Assignments
Sections
Grades and Prerequisites
Banner FINANCIAL AID
General Person
Staff
Faculty Load
Disbursements
Employees
Prospects
Jobs
Registration
Registration Fees
Accounts Receivable
Applicants
Recruiting
Banner HUMAN RESOURCES
Enrollment
Housing Fees
Location Management
Charges and Payments
Recruits
Housing and Meal Assignments
Admissions
Accepted Candidates
General Student
Graduates
Banner ADVANCEMENT
Banner FINANCE

Diagram



General student records have been created via the traditional method through Admissions (using SAAADMS) or by quick admitting (via SAAQUIK).

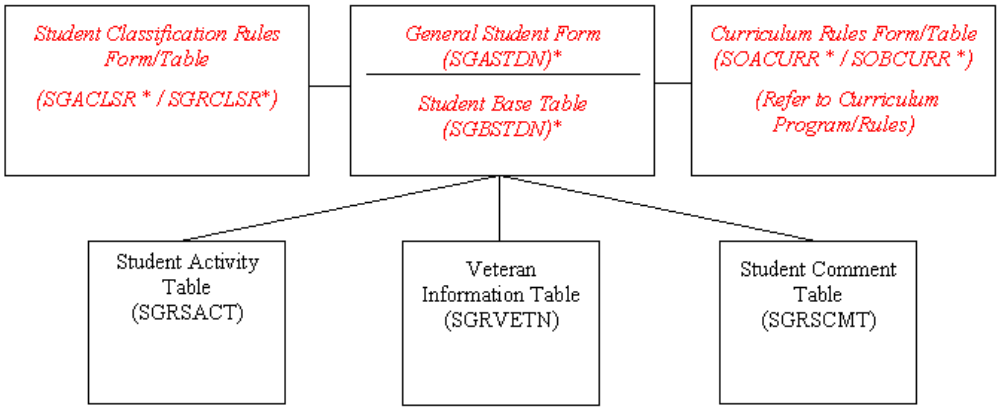
SIBINST table is populated with faculty data and advisor flag.

Objectives

Examine/Review

- Major & Required Forms and Tables
- Reports, Processes and Procedures
- Conversion of Data

Overview



Major Form/Table

General Student Form (SGASTDN) / Student Base Table (SGBSTDN)

- Used to maintain current and historical information about a student

SGASTDN form also utilizes the following tables:

- Student Activity Table (SGRSACT)
- Veteran Information Table (SGRVETN)
- Student Comment Table (SGRSCMT)

Notes

- Data in form is similar to Recruiting and Admissions
- No change can be made in SGASTDN for a term if the student has registered for that term. Changes would need to originate in SFAREGS
- Must have a SPRIDEN record
- Must know how far back to go with academic history
- A student must have a SGBSTDN record before the registration process is allowed on that student's record
- Must have correct flags on stvmajr (major, minor, concentration)
- Must have SGBSTDN for records if you are converting Academic History

Rule Forms/Tables

Student Classification Rules Form/Table (SGACLSR/SGRCLSR)

- Used to establish classification rules based on range of credit hours entered and student attributes

Curriculum Rules Form/Table (SOACURR/SOBCURR)

- Refer to Curriculum/Program Rules
- If rules are to be used, indicator will be 'ON' for General Student

Major Validation Tables/Forms

- Term Code Validation Form/Table (STVTERM)
- Residence Code Validation Form/Table (STVRESD)
- Level Code Validation Form/Table (STVLEVL)
- Student Status Code Validation Form/Table (STVSTST)
- Campus Code Validation Form/Table (STVCAMP)
- Class Code Validation Form/Table (STVCLAS)
- College Code Validation Form/Table (STVCOLL)
- Degree Level Code Validation Form/Table (STVDLEV)
- Degree Code Validation Form/Table (STVDEGC)
- Degree Award Category Code Validation Form/Table (STVACAT)
- Major, Minor, Concentration Code Validation Form/Table (STVMAJR)
- Student Type Code Validation Form/Table (STVSTYP)

Most of the validation tables have been used in Recruiting and Admissions. When the student record is created, the data from Admissions (SARADAP) will default into SGBSTDN.

Additional Information

- SGRADVR - Multiple advisors
- SGRSPRT - Sports
- SGRCHRT - Cohorts
- SGRSATT - Attributes
- SGRDISA - Disability Services

Rules

- SOBCURR -- major, program, department, etc.
- SGRCLSR -- Student classification rules

Questions

What tables are part of the General Student Module?

```
select table_name
  from all_tables
 where table_name like ‘SG%’
```

What data elements are required?

```
  desc sgbstdn
```

Notice the “NOT NULL” columns.

What are the key fields in sgbstdn?

```
    select column_name
      from all_cons_columns
     where table_name = 'SGBSTDN'
       and constraint_name = 'PK_SGBSTDN';
```

Reports and processes

- Hold Purge (SGPHOLD)
- General Student Purge (SGPSTDN)
- Student Report (SGRSTDN)

See Student Technical Reference Manual, Chapter 10, for additional information on Student Module reports and processes

Other Scripts

$BANNER_HOME/student/dbprocs

functions (sgf*)

$BANNER_HOME/student/views

views (sgv*): sgvstd0.sql creates view as_student_data

Some views are used in conjunction with Object:Access method of retrieving data from database, using the concept of “layered” views; you must have the GTVSDAX form/table populated with crosswalk values.

Clients should know the naming conventions and the locations of these other database object creation scripts. To use them as models, create your own MODS directory (as discussed earlier in this course) and put any modifications in there.

For more information about Object:Access views and the GTVSDAX translation form/table, contact your account manager to request the manuals and/or appropriate training.

Conversion Issues

Questions

What General Student data do you have in your legacy system?

How far back do you wish to go with your data conversion?

How do you determine where to put legacy data in Banner?

- Must have a student record with sgbstdn_term_code_eff = first term of history

Mass Entry Admissions / General Student / Graduation Enhancement

Introduction

This enhancement introduces mass entry capability to admissions and general student processing, and enhances the existing graduation mass entry functionality. Each mass entry form has search, update, and results information.

Mass entry processing is based on user-defined search and update criteria and includes curriculum elements where appropriate. Users can select students based on form search criteria and update their data based on the update criteria. The selected students can be reviewed and the updates selectively processed. Updates can be processed immediately or held for later processing in job submission using a new batch process. A new form is used to view processing results for the mass entry forms, whether the results are processed immediately on the mass entry form or via batch.

The mass entry forms retain audit information such as the user ID, date, timestamp, search criteria, update criteria, and the students that were processed. Audit information can be purged using a new process. The mass entry forms can also be used to query student information only, in which case the audit information is not retained.

General Student Mass Entry

The new General Student Mass Entry Form (SGAMSTU) is used for mass entry general student processing. You can search and update general student records on SGAMSTU when a general student record exists for the student on SGASTDN for the effective term that is entered in the search criteria. The effective term is required when any other search criteria are entered in order to proceed to the Results window.

For more information about this enhancement, please refer to the *Banner 8 Student Release Guide*.

Self Check – General Student Exercise

Exercise

Write a query that returns the student's full name, id, advisor's name, major code, and residency code from the current student record.

Self Check – General Student Exercise – Answer Key

Exercise

Write a query that returns the student's full name, id, advisor's name, major code, and residency code from the current student record.

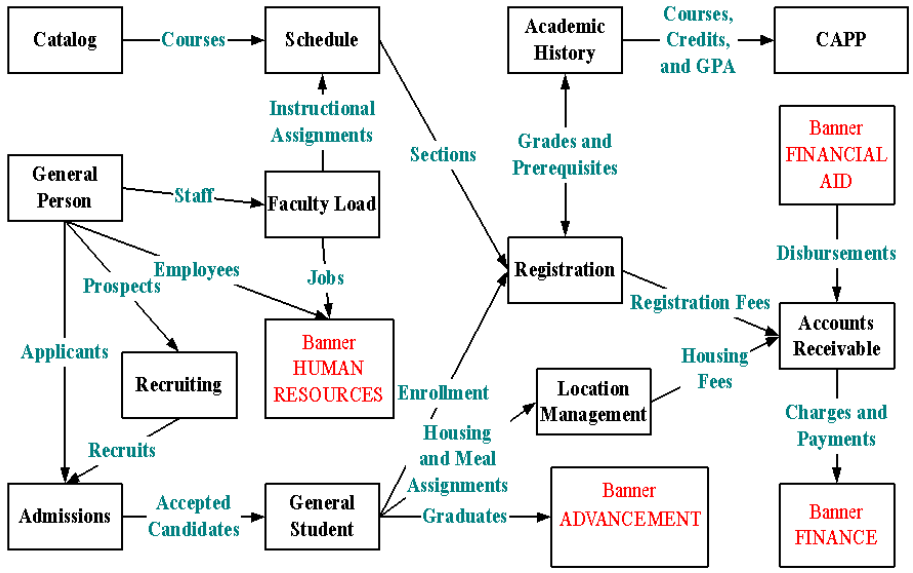
```
select substr(S.spriden_last_name, 1,15) || ', ' ||
          substr(S.spriden_first_name,1,15),
       S.spriden_id,  sgbstdn_majr_code_1,
       sgbstdn_resd_code,
       substr(A.spriden_last_name, 1,15)
  from spriden S, spriden A, sgbstdn, sgradvr
 where sgradvr_pidm = S.spriden_pidm
   and S.spriden_change_ind is null
   and sgradvr_term_code_eff =
         (SELECT MAX(I.SGRADVR_TERM_CODE_EFF)
            FROM SGRADVR I
           WHERE I.SGRADVR_TERM_CODE_EFF <= '&term'
             AND SGRADVR_PIDM = I.SGRADVR_PIDM)
   and sgradvr_pidm = sgbstdn_pidm
   and sgbstdn_term_code_eff =
         (SELECT MAX(B.SGBSTDN_TERM_CODE_EFF)
            FROM SGBSTDN B
           WHERE B.SGBSTDN_TERM_CODE_EFF <= '&term'
             AND SGBSTDN_PIDM = B.SGBSTDN_PIDM)
   and sgradvr_advr_pidm = A.spriden_pidm
   and A.spriden_change_ind is null
```

Accounts Receivable

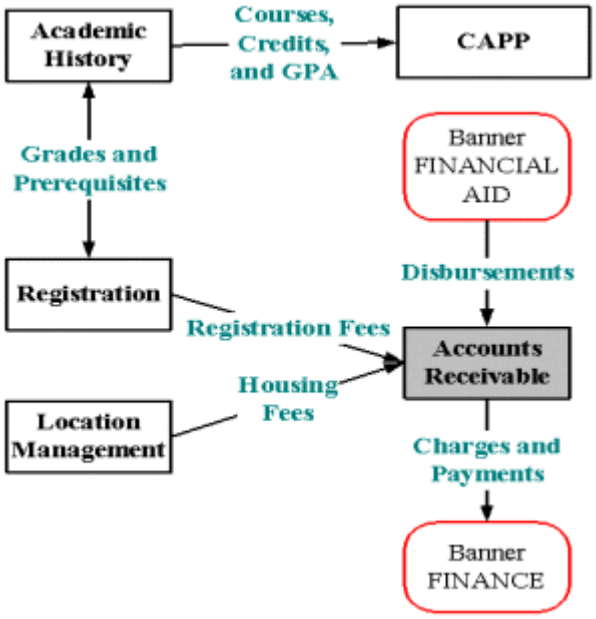
Objectives

At the end of this section, you will be able to describe the role and functions of the Accounts Receivable module.

Diagram


Catalog
Courses
Schedule
Academic History
Courses, Credits, and GPA
CAPP
Instructional Assignments
Sections
Grades and Prerequisites
Banner FINANCIAL AID
General Person
Staff
Faculty Load
Registration
Disbursements
Employees
Prospects
Jobs
Registration Fees
Accounts Receivable
Applicants
Banner HUMAN RESOURCES
Housing Fees
Recruiting
Enrollment
Location Management
Charges and Payments
Housing and Meal Assignments
Recruits
Admissions
Accepted Candidates
General Student
Graduates
Banner ADVANCEMENT
Banner FINANCE

Diagram



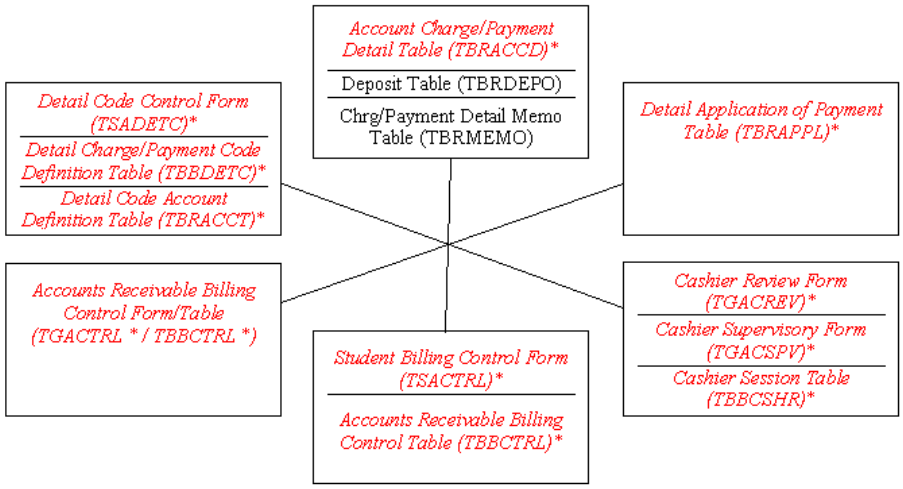
For additional process flow and database schematics, refer to the Student Technical Reference Manual, Chapters 8 and 9.

Objectives

Examine/Review

- Major & Required Forms and Tables
- Reports, Processes and Procedures
- Conversion of Data

Diagram



Forms/Tables with an asterisk (*) are required in live processing.

Note: For conversion, only TBRACCD needs to be populated. You will need to set up TBBDETC and TBRACCT first, along with other validation tables.

Major Validation Tables/Forms

- Bill Code Validation Form/Table (TTVBILL)
- Detail Category Code Validation Form/Table (TTVDCAT)
- Delinquency Code Validation Form/Table (TTVDELI)
- Deposit Type Code Validation Form/Table (TTVDTYP)
- Payment Type Code Validation Form/Table (TTVPAYT)
- Charge/Payment Source Code Validation Form/Table (TTVSRCE)
- Term-Based Designator Validation Form/Table (TTVTBDS)
- Tax Type Code Validation Form/Table (TTVTAXT)
  (for Canadian Inst. only)

Accounts Receivable Billing Control Form (TGACTRL) / Student Billing Control Form (TSACTRL)

TGACTRL / TBBCTRL

The Billing Control Table (TBBCTRL) is used with each of these forms.

These forms are required for conversion.

Detail Code Control Form (TSADETC)

TSADETC

- Enter detail code information
- Establish payment priorities used in the Application of Payment Process (TGRAPPL)

Priority

- Priority is an algorithm-determined 3-digit code that determines a payment hierarchy
- `select distinct tbbdetc_priority from tbbdetc`
  will display which priorities have been set
- “0” is a wildcard in priority codes -- it will pay anything
- TBBDETC, TBRACCT tables
- Establishes interface with Finance package (Banner Finance or a third-party package)
- Set up fund codes, account numbers
- Required for conversion

AR Rules Forms

TSASBRL

Schedule/Bill Rules Form (TSASBRL)

This form sets up parameters used in the Student Billing Statement Process (TSRCBIL). TBBSBRL is its related table.

TSATBDS

Term-based Designator Rules Form (TSATBDS)

This form allows users to establish relationships between term codes and term-based AR designators. TBBTBDS is its related table.

TGACREV/TGACSPV

TGACREV

Cashier Session Review Form (TGACREV)

This form is used to review all charge or payment activity for a specific session. The Cashier Session Table (TBBCSHR) is its related table.

TGACSPV

Cashier Supervisory Form (TGACSPV)

This form is used to display all active and inactive cashiering sessions on the system. The Cashier Session Table (TBBCSHR) is its related table.

Student Account Detail Form (TSADETL)

TSADETL

This form holds account detail by detail code.

- Major Table = Student Account Detail Review Table (TBRACCD)

The form also displays deposits, memos and comments.

- Tables = Deposit Table (TBRDEPO), Chrg/Payment Detail Memo Table (TBRMEMO), Comment Table (TBRCMNT)

Student Account Detail Review Form (TSAAREV)

TSAAREV

This form is used to review and enter information about an account. It presents an online view of each transaction by term.

The Student Account Detail Review Table (TBRACCD) is its related table, which is also accessed from SFAREGS.

Student Payment Form (TSASPAY)

TSASPAY

This form is used to determine status of student's account for a term. It can be used to accept charges and disburse Financial Aid.

This form is affected by changes in TSADETL, SFAREGS, SLAMASG and other forms.

The Student Account Detail Review Table (TBRACCD) is its related table.

Questions

What tables are part of the Accounts Receivable Module?

```
select table_name
  from all_tables
 where table_name like ‘T%’
```

What data elements are required?

```
desc tbraccd
```

Notice the “NOT NULL” columns.

What are the key fields in tbraccd?

```
select column_name
  from all_cons_columns
 where table_name = ’TBRACCD'
   and constraint_name = 'PK_TBRACCD';
```

Reports and processes

- Application of Payment Process (TGRAPPL)
- Accounting Feed Process (TGRFEED)
- Student Billing Statement Process (TSRCBIL)
- Account Receipt Process (TGRRCPT)
- Miscellaneous Receipt Process (TGRMISC)

Refer to the Student Technical Reference Manual, Chapter 10, for a complete list of Accounts Receivable reports and processes.

Application of Payments Process (TGRAPPL)

Overview

This process:

- Applies payments to charges for accounts based on priority (tbbdetc_priority)
- Creates correct accounting entries to be fed by TGRFEED process
- Gets other rules from TBBCTRL table

The process is a C program run from Job Submission. Results are visible on the Application of Payment Review Form (TSIAPPL), and it populates the Detail Application of Payment Table (TBRAPPL).

Refer to the matrix in the Student Technical Manual for stats about this process.

Application of payments

This chart shows how the process TGRAPPL applies payments, using a series of transactions in the Student Account Detail Review Table (TBRACCD).

Detail codes:

- ACTF = activity fee
- T101 = tuition
- CHEK = Check
- AMEX = American Express Payment

Detail codes are defined in TBBDETC as charge or payment codes.

TBRACCD table	**TGRAPPL applies:**	**BALANCES**	**TBRAPPL table**
$35 ACTF [tran num 1]	$7000 AMEX pmt [*tbracct tran num 3*]	chg. = $0 pmt = $6965	tbrappl_chg_tran_number 1 tbrappl_pay_tran_number 3 tbrappl_amount = $35
$7500 T101 [*tran num 2*]	$6965 pmt bal [bal of AMEX pmt tbraccd tran num 3)	chg. = $535 pmt. = $0	tbrappl_chg_tran_number 2 tbrappl_pay_tran_number 3 tbrappl_amount = $6965
$7000 AMEX [*tran num 3*]	applied to charges in trans 1 and 2		
$535 CHEK [*tran num 4*]	$535 CHEK pmt	chg. = $0 pmt. = $0	tbrappl_chg_tran_number 2 tbrappl_pay_tran_number 4 tbrappl_amount = $535

Accounting Feed Process (TGRFEED)

Overview

This process takes all applications of payment, deposits, miscellaneous transactions and account detail transactions from finalized cashiering sessions. Based on the accounts built, it creates a file of accounting detail records (GURFEED) that interface the Accounts Receivable module with the institution's financial accounting system, along with refund and check information (GURAPAY).

Source tables are updated to show that those records have been fed into the General Ledger.

Output

The process produces a report that details debit and credit entries by account number.

TGRFEED uses data from TBRAPPL, TBRDEPO, TBRMISD and TBRACCD, and refers to the TBRACCT, TBBDETC and TBBCTRL tables for distribution and detail information.

TGRFEED goes to TSADETC (TBRACCT) to get accounting distribution codes and rules.

TGRFEED is a C program run from Job Submission.

Student Billing Statement Process (TSRCBIL)

Overview

In Invoicing Mode, TSRCBIL prints invoices and estimates credits based on current charges.

In Statement Mode, TSRCBIL calculates credits, prints bills, updates accounts with billed and due dates, applies credits and begins the aging process.

Schedules may also be printed via this job.

Rule parameters for TSRCBIL are set on the Bill Selection Parameters Window of the Schedule/Bill Rules Form (TSASBRL) (TBBSBRL table).

The process updates AR indicators in SLRMASG, SLRPASG, SLRRASG and SFBETRM.

TSRCBIL is a C program run from Job Submission, which can be run in sleep/wake mode.

Other Scripts

$BANNER_HOME/student/arsys

functions (t*f*) ex: tofbala.sql

$BANNER_HOME/student/views

views (t*v*): tovbal0.sql creates view at_ar_history_by_balance

Some views are used in conjunction with theObject:Access method of retrieving data from the database, using the concept of “layered” views; you must have the GTVSDAX form/table populated with crosswalk values.

This one does not use the GTVSDAX table; not all layered views refer to GTVSDAX. It is used as a crosswalk table to “spread out” repeating table row values into columns for easier reporting.

Clients should know the naming conventions and the locations of these other database object creation scripts. To use them as models, create your own MODS directory (as discussed earlier in this course) and put any modifications in there.

For more information about Object:Access views and the GTVSDAX translation form/table, contact your account manager to request the manuals and/or appropriate training.

Conversion issues

- Balance Forward
- Set up controls on TSACTRL
- Populate TBBDETC -- Detail Charge/Payment Code Definition Table
- Populate TBRACCT -- Detail Code Account Definition Table (fund and account codes)

TBBDETC and TBRACCT must be populated before fee assessment can take place.

Refer to Student Technical Ref. Manual.

Self Check – Accounts Receivable Exercises

Exercise 1

Find all columns in the Accounts Receivable module associated with detail codes.

Exercise 2

Write a simple report that will show full name, id, term and balance from the student account detail table for a given term for those students with a balance > 0. Prompt user for term.

Self Check – Accounts Receivable Exercises – Answer Key

Exercise 1

Find all columns in the Accounts Receivable module associated with detail codes.

```
select owner,
       table_name,
       column_name,
       comments
  from all_col_comments
 where owner = 'TAISMGR'
   and column_name like '%DET%_CODE'
```

Exercise 2

Write a simple report that will show full name, id, term and balance from the student account detail table for a given term for those students with a balance > 0. Prompt user for term.

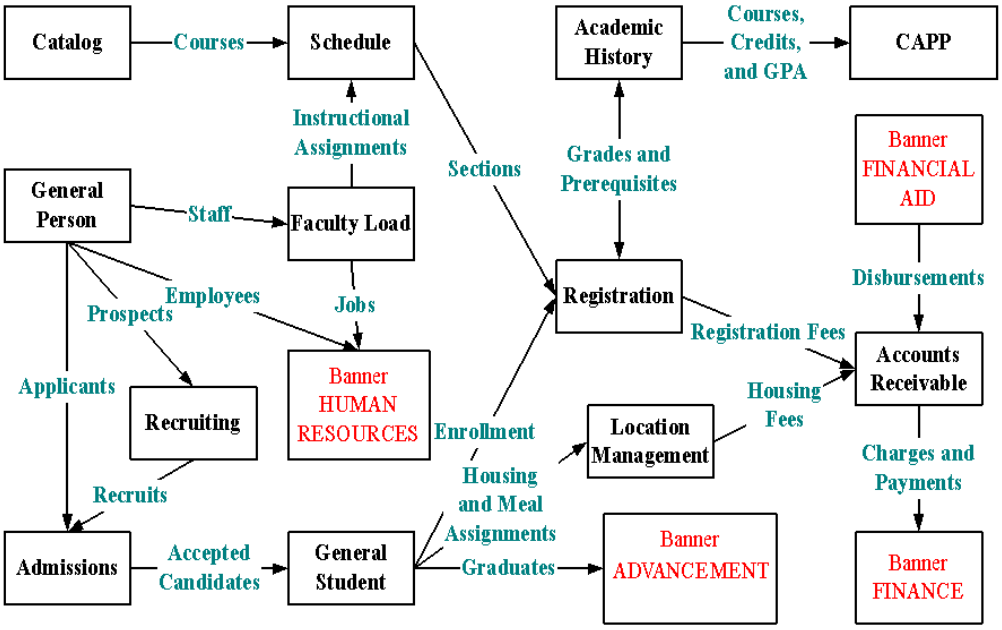
```
select substr(spriden_last_name,1,12),
       substr(spriden_first_name,1,10),
       spriden_id,
       sum(tbraccd_balance)
 from  spriden, tbraccd
where  spriden_pidm = tbraccd_pidm
  and  spriden_change_ind is null
  and  tbraccd_balance > 0
  and  tbraccd_term_code= '&term'
group  by spriden_last_name,
          spriden_first_name,
          spriden_id
order  by spriden_last_name
```

Registration

Objectives

At the end of this section, you will be able to describe the role and functions of the Registration module.

Diagram

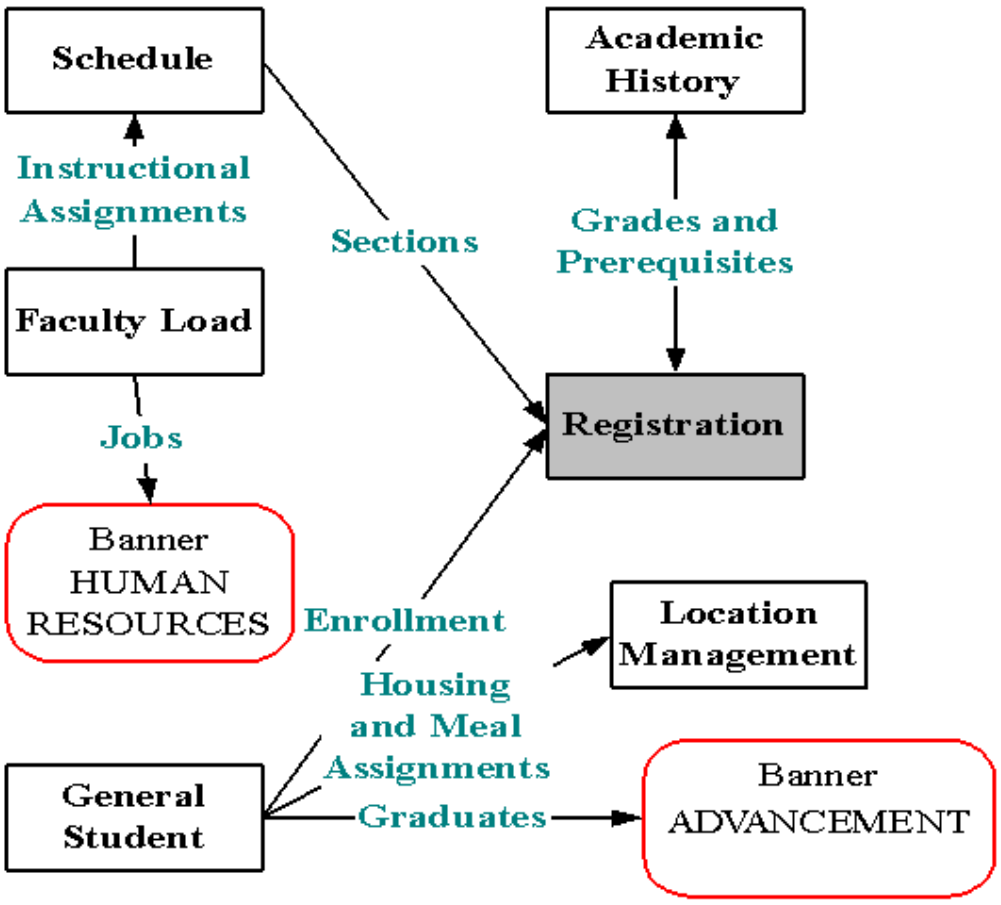


Notice the placement of the Registration module.

Catalog, Schedule, General Person, Admissions, General Student, Faculty Load, Location Management and AR have all been implemented. Registration is connected to all of these modules.

Accounts Receivable appears “after” Registration in this chart to show the flow of activity; however, the implementation order must have AR in place before Registration can occur, so that fees from Registration may be assessed.

Diagram



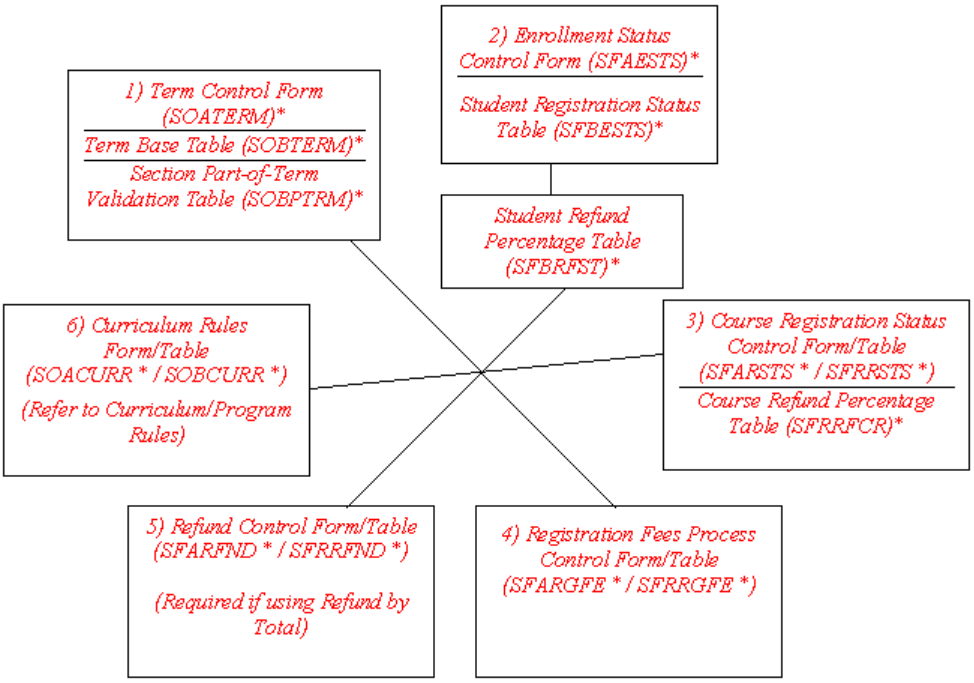
- Catalog is built
- Buildings and rooms are defined
- Schedule of classes is built
- Faculty Information is loaded
- Student records are active
- Accounts Receivable has been set up
- Current students may now register for classes

Objectives

Examine/Review

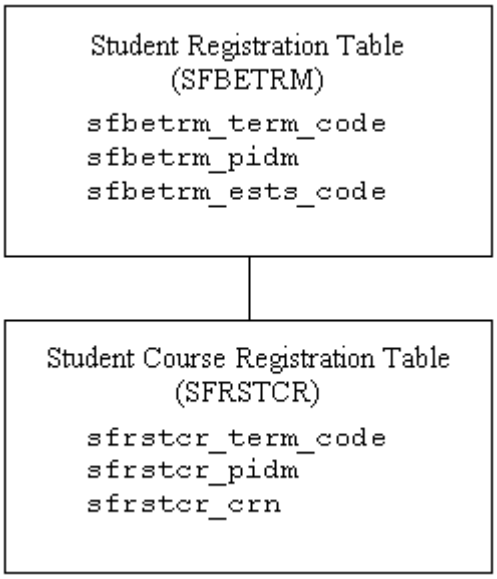
- Major & Required Forms and Tables
- Reports, Processes and Procedures
- Conversion of Data

Diagram



Note: Registration is connected directly to Student AR through fee assessment.

Registration tables



For reporting purposes, these two tables are most important in Registration Module.

Forms and tables

Curriculum Rules Form (SOACURR)

- SOBCURR is the related table

Term Control Form (SOATERM)

- SOBTERM & SOBPTRM are the related tables
- Set Online Fee Assessment
- Error Checking & Severity Level, etc.
- Rules forms must be set up before registration can occur

Enrollment Status Control Form (SFAESTS)

- SFBESTS & SFBRFST are the related tables
- Enrollment status codes are maintained on the Enrollment Status Code Validation Form/Table (STVESTS)
- Also related: Student Refund Percentage Table (SFBRFST)

Course Registration Status Control Form (SFARSTS)

- SFRRSTS & SFRRFCR are the related tables
- Course registration status codes are maintained on the Course Registration Status Code Validation Form/Table (STVRSTS)
- Also related: Student Refund Percentage Table (SFBRFST)

Registration Fees Process Control Form (SFARGFE)

- SFRRGFE is the related table

Refund Control Form (SFARFND)

- SFRRFND is the related table
- Connection to AR

Major Validation Tables/Forms

All that were mentioned in the previous modules

For a complete list, refer to the Student User Manual.

Major Form/Tables

Student Course Registration Form (SFAREGS)

- Mechanism for registering students
- Upon opening SFAREGS for the first time in a Banner session, you go directly to SOADEST (printer choice form for sleep/wake processes)
- SFBETRM - Table containing Registration Status
- SFRSTCR - Table containing Course Registrations

A registration record (SFBETRM) may be created without courses. Be aware of this when writing reports using SFBETRM. (The Registered, Not Paid Process (SFRRNOP), when run in update mode, will "clean out" these records. Alternatively, a script written to delete unwanted SFBETRM records may be necessary.)

Fee Assessment

Fee Assessment

Fee Assessment may be performed online (via SOATERM), or in batch via the Batch Fee Assessment Process (SFRFASM).

Fee Assessment uses rules built in Catalog, Schedule and Registration Modules. It always writes a record to the Registration Fee Assessment View Collector Table (SFRCOLR), which should be cleaned out periodically.

There is a good discussion of Fee Assessment options in the Registration chapter of the Student User Manual.

Fee Assessment 8.0 Enhancement

This Banner 8.0 enhancement is part of the changes made to registration processing for Concurrent Curricula. This enhancement provides expanded rule capability for registration fee assessment processing. Rules can now be created based on all curriculum elements. Fees triggered by registration changes can be assessed based on primary and non-primary curriculum records.

Fee assessment rules can now be used to assess a student based on multiple curriculum elements and any curriculum type including primary and secondary curriculum. The field of study type and the field of study code, as well as curriculum rate code and curriculum student type elements have been added to the assessment rules on SFARGFE. Fee assessment rules can also be assessed based on student information fields such as residency, student attribute, student rate, student type, cohort, class, and visa type.

SFARGFE has been redesigned and expanded so that data elements for charges and fees, curriculum rules, registration criteria, and student and course rules are grouped together in separate blocks.

For more information on this enhancement, please refer to the *Banner 8 Student Release Guide*.

Questions

What tables are part of the Registration Module?

```
select table_name
  from all_tables
 where table_name like ‘SF%’
```

What data elements are required?

```
     desc sfrstcr
```

Notice the “NOT NULL” columns.

What are the key fields in sfrstcr?

```
    select column_name
      from all_cons_columns
     where table_name = ’SFRSTCR'
       and constraint_name = 'PK_SFRSTCR';
```

Reports and processes

- Student Schedule Process (SFRSCHD)
    - Can be run in sleep/wake mode
- Class Roster Process(SFRSLST)
- Batch Fee Assessment Process (SFRFASM)
- Registered, Not Paid Process (SFRRNOP)
- Registration Purge Process (SFPREGS)

Student Schedule Process (SFRSCHD)

This process prints a student schedule for a term. It may be run in sleep/wake mode.

SFRSCHD is a C program run from Job Submission.

Batch Fee Assessment Process (SFRFASM)

This process is run if an institution decides not to do online fee assessment. Registration charges are posted to the student's account in the Accounts Receivable module.

SFRFASM is a C program run from Job Submission.

There is a good discussion of Fee Assessment options in the Registration chapter of the Student User Manual.

Registered, Not Paid Process (SFRRNOP)

This process prints/purges all students who have registered but not yet paid for a term. It may be run in query or update mode.

SFRRNOP is a C program run from Job Submission.

Sleep/Wake Mode

Purpose

Sleep/Wake mode allows you to run jobs in cyclical or “sleep/wake-up” manner.

There are two methods of doing this:

- Submit from Operating System and terminate manually (scripts are in $BANNER_HOME/general/misc and $BANNER_HOME/general/plus)
- Submit through Banner Job Submission (GJAPCTL form)

Method two (through forms) is the most commonly used method.

Submitting Sleep/Wake processes via Job Submission

- Define Printer and print command on GTVPRNT
- On the SOADEST or TOADEST form, enter the correct printer code from GTVPRNT
- On GJAPCTL, for the valid sleep/wake jobs, enter the parameters that specify sleep/wake processing
- Stop sleep/wake process on GJASWPT form

Refer to Chapter 10 of the Technical Reference Manual for specific directions for setting up printer commands, etc.

Sleep/Wake jobs

Jobs that can be run in sleep/wake mode:

- Student Schedule Process (SFRSCHD)
- Academic Transcript Process (SHRTRTC)
- Account Receipt Process (TGRRCPT)
- Student Billing Statement Process (TSRCBIL)
- Miscellaneous Receipt Process (TGRMISC)

Other Scripts

$BANNER_HOME/student/dbprocs

functions (sff*) ex: sffrgfe1.sql

$BANNER_HOME/student/views

views (sfv*): sfvstc0.sql creates view as_student_registration_detail

Some views are used in conjunction with theObject:Access method of retrieving data from the database, using the concept of “layered” views; you must have the GTVSDAX form/table populated with crosswalk values.

This one does not use the GTVSDAX table; not all layered views refer to GTVSDAX. It is used as a crosswalk table to “spread out” repeating table row values into columns for easier reporting.

Clients should know the naming conventions and the locations of these other database object creation scripts. To use them as models, create your own MODS directory (as discussed earlier in this course) and put any modifications in there.

For more information about Object:Access views and the GTVSDAX translation form/table, contact your account manager to request the manuals and/or appropriate training.

Conversion Issues

Issues

- Conversion is not recommended for Registration.
- Possibly could run parallel
- Legacy and Banner

Error Message Management

Introduction

As part of the Banner 8.0 Internationalization enhancements, Banner Student registration has been modified so that the message text can be translated into non-English languages. The error messages presented to users now reside in a rules table that can be modified at your institution.

New form

- Registration Error Messages Form (SFARMSG)

  This form is used to maintain registration error messages by type. Messages can be customized by your institution. Messages that are system required cannot be changed, except to modify the customized (local) message text.

Changed forms

- Student Course Registration Audit Form (SFASTCA)
- Student Course Registration Form (SFAREGS)
- Student Course/Fee Assessment Query Form(SFAREGF)

Changed reports and processes

- Course Request Update (SFPFREQ)
- Course Request Edit Report (SFPCREQ)
- Registration Admin Messages Report (SFRRGAM)

Please refer to the *Banner 8 Student Release Guide* for more information.

Waitlist Automation Enhancement

This Banner Student 8.0 enhancement includes updates to existing waitlist and registration functionality to help students to move from waitlisted to registered status, to help institutions configure rules to control waitlist priority, and to support self-service waitlist functions.

New Forms

- Automated Waitlist Term Control Form (SOAWLTC)
- Waitlist Automation Section Control Form (SSAWLSC)
- Waitlist Notification Query Form (SFIWLNT)
- Waitlist Priority Management Form (SFAWLPR)
- Cross List Waitlist Priority Management Form (SFAXWLP)
- Reserved Seats Waitlist Priority Management Form (SFARWLP)

Changed Forms

- Schedule Form (SSASECT)
- Student Course Registration Form (SFAREGS)

New Reports and Processes

- Available Seats to Zero Process (SSRASTZ)
- Batch Waitlist Notification Process (SFRBWLP)
- Waitlist Priority Reorder Process (SFPWLRO)

Changed Reports and Processes

- Waitlist Enrollment Purge (SFPWAIT)
- Class Roster Report (SFRSLST)

Please refer to the *Banner Student Self-Service 8.0 Release Guide* and the *Banner Faculty and Advisor Self-Service 8.0 Release Guide* for more information on how this enhancement affects self-service processing.

Course, Section and Registration Restrictions Enhancement

Introduction

This enhancement allows institutions to restrict registration by all curriculum elements, including field of study type and department, as well as student attribute and cohort. The restrictions can be set at the course catalog and course section levels. The Course Registration Restrictions Form (SCARRES) and the Schedule Restrictions Form (SSARRES) have been modified to support these changes.

Please refer to the Banner Student Self-Service 8.0 Release Guide for more information on this enhancement.

Reserved Seats Enhancement

Introduction

This enhancement is part of the changes made to registration processing for Concurrent Curricula. Curriculum elements have been added to the Reserved Seats window on SSASECT, which allows the user to specify any part of the curriculum, including the primary and secondary curriculum elements. Additional data elements have been added to the Reserved Seats window to provide expanded reserved seats rules capabilities beyond level, class, and major.

New Form

Reserved Seats Inquiry Form (SSIRESV)

- This form is used to query and review reserved seats rules for a term and CRN combination. This form can be accessed from the Options Menu on SSASECT using the Query Reserved Seats [SSIRESV] item.

Changed Forms

- Schedule Form (SSASECT)

Changed Reports and Processes

- Schedule Purge (SSPSCHD)
- Term Roll Report (SSRROLL)

For more information on this enhancement, please refer to the *Banner 8 Student Release Guide*.

Registration Overrides Enhancement

Introduction

This enhancement is part of the changes made to registration processing for Concurrent Curricula. This enhancement allows you to designate registration permit-overrides by field of study type, department, student attribute, and cohort. The Registration Permit-Overrides Control Form (SFAROVR) has been modified to include these new registration restrictions.

This coincides with changes made to SOATERM for section options registration error checking, as well as the restriction rule options available on SCARRES and SSARRES for department, student attribute, and cohort.

These updates are discussed in the “Course, Section, and Registration Restrictions- Functional” and the “Course, Section, and Registration Restrictions- Technical” enhancement sections in the *Banner 8 Student Release Guide.*

Minimum/Maximum Registration Hours Enhancement

Introduction

This enhancement is part of the changes made to registration processing for Concurrent Curricula. This enhancement provides the ability to use expanded hours rules for minimum and maximum registration hours. Minimum hours can now be assigned to a student.

Registration hours processing now uses all the curriculum elements. This gives institutions the ability to allow restriction of registration minimum/maximum hours by other criteria than just level, as using level only does not allow for tracking academic requirements for colleges and programs that have different registration hour restrictions. This also allows for greater flexibility when building registration hours rules.

Changed Forms

- Academic Standing Code Validation Form (STVASTD)
- Combined Academic Standing Code Validation Form (STVCAST)
- Sports Status Code Validation Form (STVSPST)
- Registration Minimum Maximum Hours Form (SFAMHRS)
- Student Course Registration Form (SFAREGS)
- Term Control Form (SOATERM)

Changed reports and processes

- Course Request Scheduling Process (SFPFREQ)
- Calculate Academic Standing Report (SHRASTD)

Please refer to the *Banner 8 Student Release Guide* and the *Banner Student Self-Service 8.0 Release Guide* for more information on this enhancement.

Mass Entry Registration Enhancement

Introduction

This enhancement allows you to use mass entry functionality for registration processing. You can add a course, drop a course, add and drop a course at the same time, or drop all courses for a selected group of students. You can also perform block processing for the selected group of students. Students can be selected for mass processing based on student and curriculum information or by using population selection. This new processing minimizes data entry during registration.

New Form

Registration Mass Entry Form (SFAMREG)

- This form is used to process the mass entry of registration records for a specific CRN or block code. You can search on specific criteria, perform updates, and then view the results.

Please refer to the *Banner 8 Student Release Guide* for more information on this enhancement.

Self Check – Registration Exercise

Exercise

Write a query that returns a student's full name and a list of courses for which he or she is registered for a given term, including: subject and course number, crn, and credit hours. Prompt user for term.

Self Check – Registration Exercise – Answer Key

Exercise

Write a query that returns a student's full name and a list of courses for which he or she is registered for a given term, including: subject and course number, crn, and credit hours. Prompt user for term.

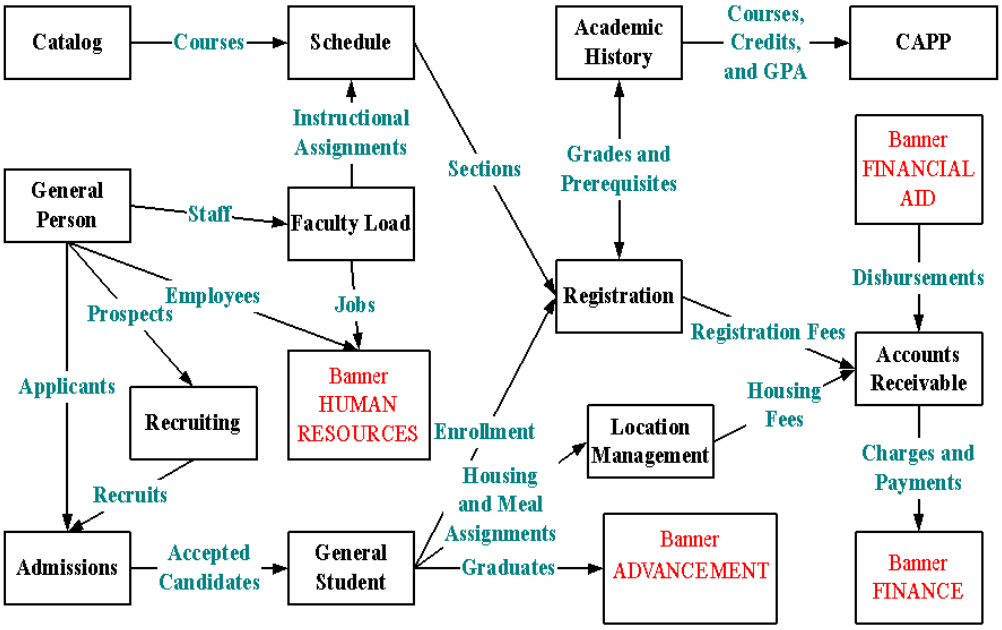
```
col stunam   for a30    hea   'STUDENT NAME'
col subj     for a8     hea   'SUBJECT'
col crse     for a6     hea   'COURSE|NUMBER'
col crn for a7     hea   'CRN'
col hrs for 99999  hea   'HOURS'

break on stunam noduplicates skip1

select  substr(spriden_last_name,1,15) || ', ' ||
          substr(spriden_first_name,1,15) stunam,
        ssbsect_subj_code  subj,
          ssbsect_crse_numb crse,
          sfrstcr_crn   crn,
          sfrstcr_credit_hr  hrs
 from   spriden, ssbsect, sfrstcr
where   spriden_pidm = sfrstcr_pidm
  and   spriden_change_ind is null
  and   sfrstcr_term_code = '&term'
  and   sfrstcr_rsts_code IN ('RE', 'RW')
  and   sfrstcr_crn = ssbsect_crn
  and   sfrstcr_term_code = ssbsect_term_code
order by  stunam;
```

Academic History

Objectives

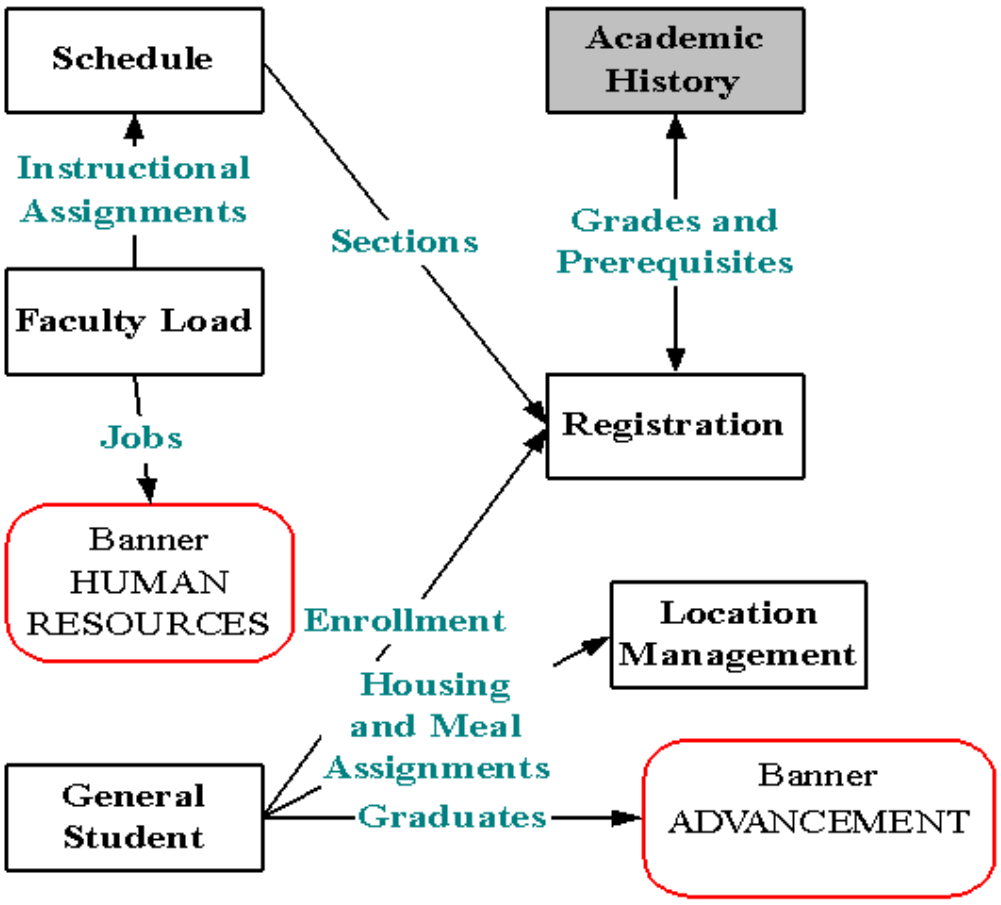
At the end of this section, you will be able to describe the role and functions of the Academic History module

Diagram



This overview diagram shows Academic History and its relationship with all other modules of the Banner Student System.

Diagram



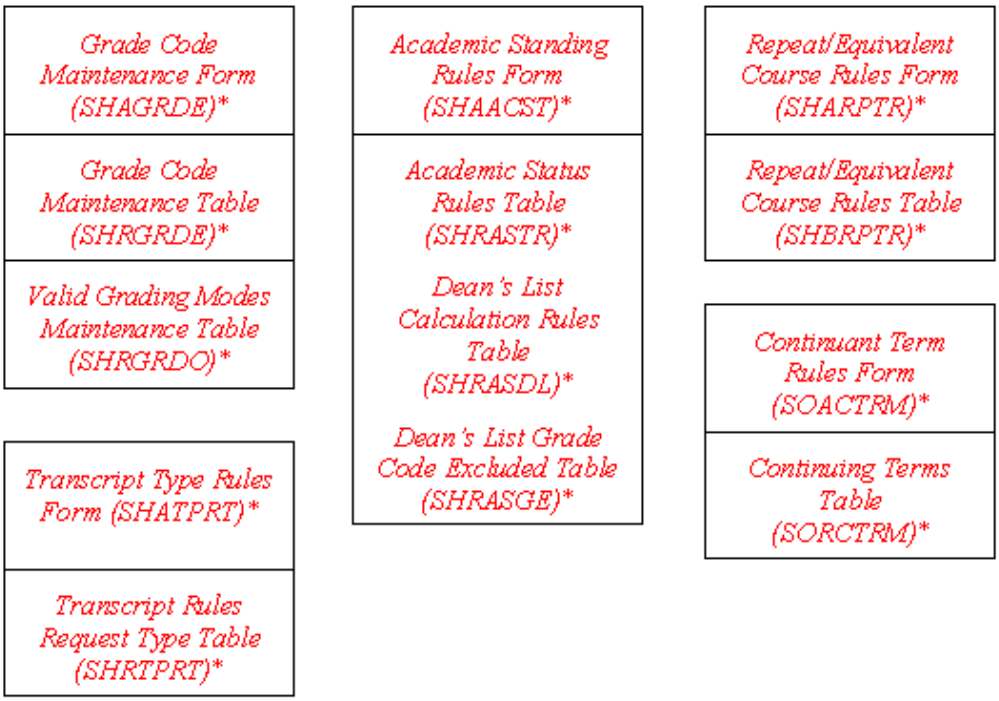
Academic History should be implemented prior to Registration if pre- and/or co-requisite checking is used. Otherwise, Academic History information can be implemented as soon as possible after Registration in order for current students to have statistics (and courses) in Academic History prior to the end of the first “live” term.

Objectives

Examine/Review

- Major & Required Forms and Tables
- Reports, Processes and Procedures
- Conversion of Data

Rules



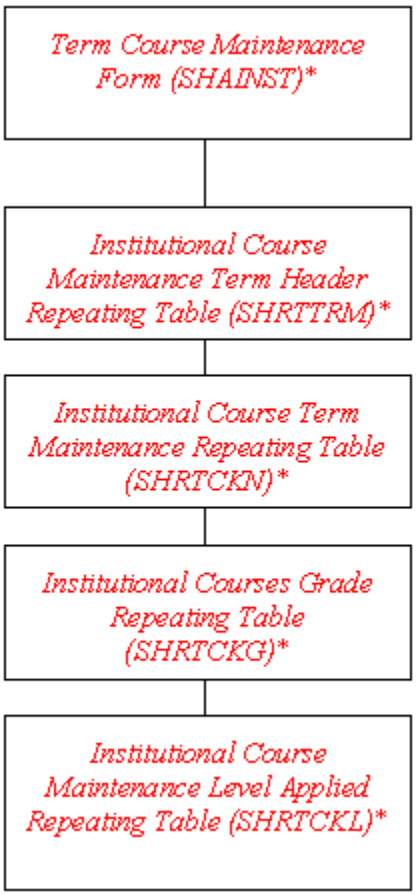
All of these rule tables are required. (*Asterisked (*)* text indicates required.)

Major Validation Tables/Forms

- Grade Change Code Validation Form/Table (STVGCHG)
- Grading Mode Code Validation Form/Table (STVGMOD)
- Academic Standing Code Validation Form/Table (STVASTD)
- Many of the validation tables that have been referenced in previous modules

Institutional Coursess

Diagram



If detailed institutional course information is to be converted, then all of the tables listed will be required.

Term Course Maintenance Form (SHAINST)

Term Header Information Table (SHRTTRM)

- Academic Status
- Dean's List

For each institutional course taken:

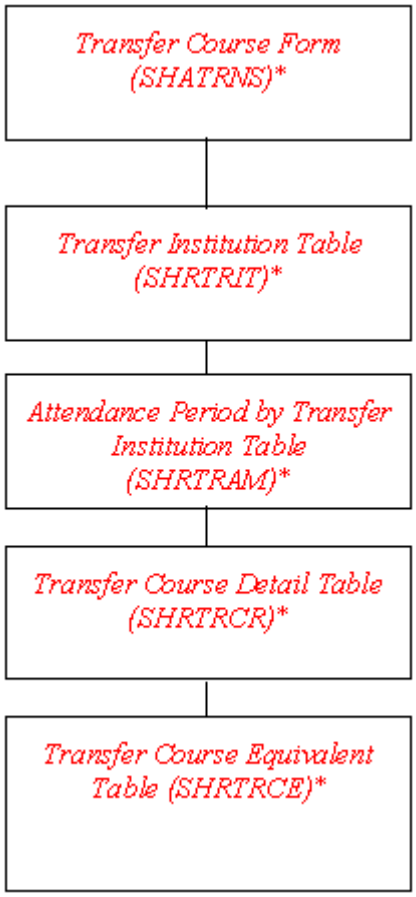
- Institutional Course Term Maintenance Table (SHRTCKN)
  - subjects, course numbers, titles, etc.
- Institutional Course Grade Repeating Table (SHRTCKG)
  - credit hours, final grade, etc.
- Course Level Applied Repeating Table (SHRTCKL)
  - course level applied

Records are associated by term and by SHRTCKN sequence numbers.

- Term Header Information Table (SHRTTRM)
- Course Section Attribute Table (SHRATTR)
- Transcript Comment Table by Level (SHRTMCM)
- Transcript Comment Table by Term (SHRTTCM)

Transfer Courses

Diagram



If detailed transfer course information is to be converted, then all of the tables listed will be required.

Academic History: Transfer Course Form (SHATRNS)

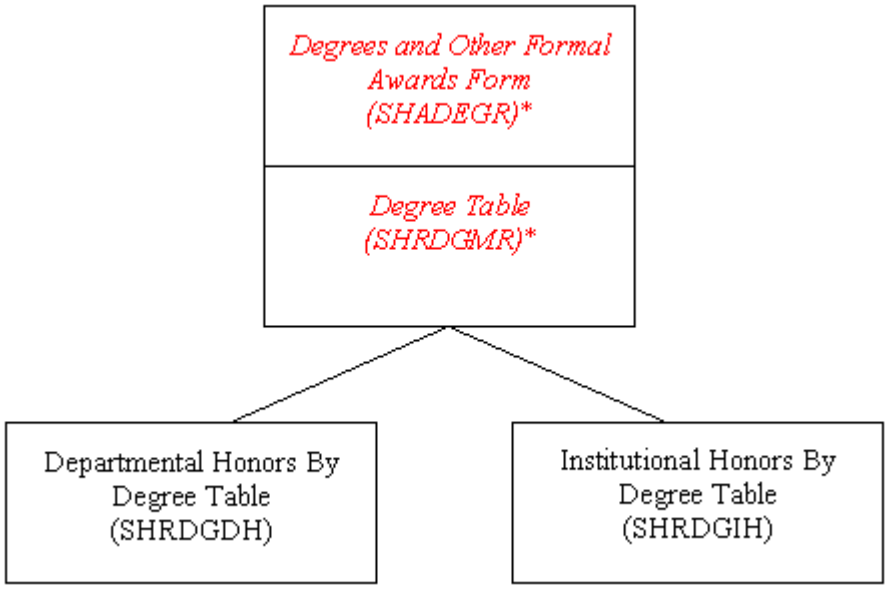
Required only if detail of transfer courses is to be converted.

For each course transferred:

- Transfer Institution Repeating Table (SHRTRIT)
- Attendance Period by Transfer Institution Repeating Table (SHRTRAM)
- Transfer Course Detail Repeating Table (SHRTRCR)
- Transfer Course Equivalent Repeating Table (SHRTRCE)

Records are associated by term, and by SHRTRAM, SHRTRIT and SHRTRCR sequence numbers.

Diagram



Each student must have at least one degree record with the status ‘SO’. Those students who have graduated will have a second sequence number with a status of ‘AW’.

Degree Information - SHADEGR

Degree Repeating Table (SHRDGMR)

- Required even if a student does not have a degree
- SHRDGMR_ DEGC_CODE = 'SO' for "seeking"
- SHRDGMR_ DEGC_CODE = 'DA' or 'AW' for "degree awarded" if student has degree
- Contains major and term awarded

Institutional Honors by Degree Table (SHRDGIH)

- Used if student had institutional honors associated with the degree.

Departmental Honors by Degree Table (SHRDGDH)

- Used if student had departmental honors associated with the degree

Records in SHRDGIH and SHRDGDH are associated by SHRDGMR sequence numbers.

Note: There are other academic history tables that can be populated during the conversion based on the legacy data (e.g., SHRQPND -- Qualifying Papers)

GPA

Tables

Level GPA Table (SHRLGPA)

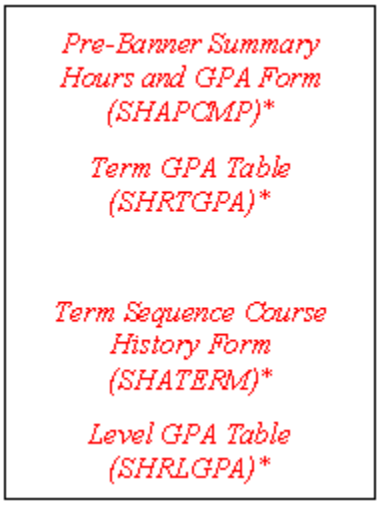
- Cumulative institutional courses (I)
- Cumulative transfer courses (T)
- Overall GPA (O) (Includes both institutional and transfer courses)

Term GPA Table (SHRTGPA)

- Term statistics for institutional courses (I)
- Term statistics for transfer courses (T)

Pre-Banner Summary

Diagram



If detailed academic history -- institutional courses/transfer courses -- are not going to be converted, then SHRTGPA should be populated with the students' GPA information -- (I)nstutional and (T)ransfer.

Refer to the Student User Manual.

SHAPCMP

The Pre-Banner Summary Hours and GPA Form (SHAPCMP) captures and maintains summary GPA in lieu of the actual converted term's course work. This is helpful if an institution does not intend to convert transcript data, or has chosen to defer the conversion to a later date. The ability to add pre-Banner hours and GPA means that more accurate assessments can be made when determining class level, and in calculating the institutional or transfer GPA.

Term GPA Table (SHRTGPA)

Results are displayed in the Pre Banner Summary Hours and GPA Form (SHAPCMP).

There will be at *least* one record per student in SHRTGPA:
`shrtgpa_type_ind = 'I'`

would reflect total cumulative statistics.

- Use '000000' as the term code

It is possible to have two records in SHRTGPA ('I' and 'T' GPA types) for a student who has transferred.

Conversion

For summary conversion, determine whether separate brought-forward data will be maintained for institutional and transfer data.

If only a total cumulative strip is to be converted, load only one SHRTGPA record per level per student, using "000000" as the SHRTGPA_TERM_CODE. For this record, set the _GPA_TYPE_IND to 'I'.

If separate institutional and transfer brought-forward data is converted, load one or two SHRTGPA records per level per student. Load one record per level, representing the institutional GPA, if the person has no brought-forward transfer work, using "000000" for the SHRLGPA_TERM_CODE and "I" for the SHRTGPA_GPA_TYPE_IND. If the person also has brought-forward transfer work, load a second record, using "000000" for the _TERM_CODE and "T" for the _GPA_TYPE_IND.

Level GPA Table (SHRLGPA)

SHRLGPA contains two records per student per level, with a third record for students who have transferred:

- (I)nstitutional GPA
- (T)ransfer GPA (not always present, depending on the student)
- (O)verall GPA (a combination of Institutional and Transfer GPAs)

Conversion

For summary conversion, determine whether separate brought-forward data will be maintained for institutional and transfer data.

If only a total cumulative strip is to be converted, load two SHRLGPA records per level per student. For one record, set the SHRLGPA_GPA_TYPE_IND to "I" (Institutional). For the second record, set the SHRLGPA_GPA_TYPE_IND to "O" (Overall).

If separate institutional and transfer brought-forward data is converted, load two or three SHRLGPA records per level per student, depending upon whether the student has transfer work at the level. For the institutional record, set the _GPA_TYPE_IND to "I". For the transfer record, set the _GPA_TYPE to "T". For the cumulative record, set the _GPA_TYPE_IND to "O".

Questions

What tables are part of the Academic History Module?

```
select table_name
  from all_tables
 where table_name like ‘SH%’
```

What data elements are required?

```
desc shrdgmr
```

Notice the “NOT NULL” columns.

What are the key fields in shrdgmr?

```
select column_name
  from all_cons_columns
 where table_name = ’SHRDGMR'
   and constraint_name = 'PK_SHRDGMR';
```

Other Scripts

$BANNER_HOME/student/dbprocs

functions (shf*) ex: shfttrm.sql

$BANNER_HOME/student/views

views (shv*): shvsum0.sql creates view as_academic_history_summary

Some views are used in conjunction with theObject:Access method of retrieving data from the database, using the concept of “layered” views; you must have the GTVSDAX form/table populated with crosswalk values.

This one does not use the GTVSDAX table; not all layered views refer to GTVSDAX. It is used as a crosswalk table to “spread out” repeating table row values into columns for easier reporting.

Clients should know the naming conventions and the locations of these other database object creation scripts. To use them as models, create your own MODS directory (as discussed earlier in this course) and put any modifications in there.

For more information about Object:Access views and the GTVSDAX translation form/table, contact your account manager to request the manuals and/or appropriate training.

Conversion Issues

Questions

Will detailed academic history data be converted?

Will you convert ALL academic history records or only a certain number of years?

What academic history data do you have in your legacy system?

How do you determine where to put it in Banner?

Reports/Processes - End of Term

End of Term processes

- Grade Roll to Academic History Process (SHRROLL)
- Repeat/Equivalent Course Check Process (SHRRPTS)
- Calculate GPA Process (SHRCGPA)
- Calculate Academic Standing Process (SHRASTD)
- Grade Mailer Process (SHRGRDE)
- Student Type Update (SHRTYPE)

Refer to the Student Technical Reference Manual for additional information on Student Module reports and processes.

Additional processes

- Academic Transcript Process (SHRTRTC)
  - Can be run in sleep/wake mode
- Degree Status Update Process (SHRDEGS)

Incomplete Grade Processing Automation Enhancement

Introduction

This Banner Student 8.0 enhancement allows an institution to automatically assign an incomplete grade code for a course when a student has not completed the coursework in the designated timeframe. This processing assumes a course has been extended to help the student finish the assignments. Extensions can be varied in length due to level (undergraduate or graduate), circumstances (illness or family emergency), research opportunities, or institution policy. Regardless of the nature of the extension, grades of "incomplete" require closure.

When an incomplete grade has been assigned, it indicates that the course has not been finished. However, a final grade may need to be assigned as a default final grade. The default final grade is a replacement grade for the incomplete grade that is assigned if no manual intervention occurs by the time the extension end date is reached. This new processing recognizes incomplete grade code values and automates the conversion of the final grades.

This enhancement contains three main components: the grade collection process and the corresponding rules, the automated processing of unreconciled, incomplete grades, and the display of the incomplete grades.

Please refer to the *Banner Student Self-Service 8.0 Release Guide* and the *Banner Faculty and Advisor Self-Service 8.0 Release Guide* for more information on this enhancement.

Manual Roll Enhancement

Introduction

This Banner 8.0 enhancement allows an institution to select a single student's curriculum and create a degree record and an outcome curriculum record. The outcome curriculum record is referenced on transcripts when a degree is awarded.

Changed forms

- Curriculum Rules Control Form (SOACTRL)
- Archived Learner Curriculum Query Form (SOIHCUR)
- Learner Curriculum Query Form (SOILCUR)
- General Student Form (SGASTDN)
- Student Course Registration Form (SFAREGS)
- Degrees and Other Formal Awards Form (SHADEGR)
- Academic History Control Form (SHACTRL)
- Graduation Application Form (SHAGAPP)

New Report/Process

- Roll Learner to Outcome Process (SHRROUT)

Changed Reports and Processes

- Learner Curriculum Purge Process (SOPLCPG)
- General Student Purge Process (SGPSTDN)
- Student Type Update Report (SHRTYPE)

For more information on this enhancement, please refer to the *Banner 8 Student Reference Guide*.

Mass Entry Admissions / General Student / Graduation Enhancement

Introduction

This enhancement introduces mass entry capability to admissions and general student processing, and enhances the existing graduation mass entry functionality. Each mass entry form has search, update, and results information.

Mass entry processing is based on user-defined search and update criteria and includes curriculum elements where appropriate. Users can select students based on form search criteria and update their data based on the update criteria. The selected students can be reviewed and the updates selectively processed. Updates can be processed immediately or held for later processing in job submission using a new batch process. A new form is used to view processing results for the mass entry forms, whether the results are processed immediately on the mass entry form or via batch.

The mass entry forms retain audit information such as the user ID, date, timestamp, search criteria, update criteria, and the students that were processed. Audit information can be purged using a new process. The mass entry forms can also be used to query student information only, in which case the audit information is not retained.

Graduation Mass Entry

The existing mass entry graduation forms have been redesigned and standardized for mass entry processing. Curriculum elements have been added to the search criteria on applicable forms. The forms reflect the design of the new Admissions, General Student, and Registration mass entry forms and use the search, update, and results features. They also use population selection and mail submission, as well as allow updates to occur immediately on the form or be held for job submission. Options menu items have also been expanded to include quick access to appropriate Banner forms.

Mass Entry Graduation Form (SHAMDEG)

You can search for and update degree records on SHAMDEG when a degree record exists for the student on SHADEGR. The search uses criteria associated with SHADEGR, except for the graduation application status code, which is associated with the degree record on SHAGAPP.

Mass Entry Ceremony Attendance Form (SHAMCAT)

SHAMCAT will present search results when a degree record exists for the student on SHADEGR, and no ceremony record exists on SHACATT for the ceremony and term entered in the update criteria. An update ceremony and term are required for any updates to occur. The ceremony and ceremony term will be inserted on SHACATT. Updates will take place, regardless of any holds the students may have.

Mass Entry Diploma Form (SHAMDIP)

SHAMDIP will present search results when a degree record exists for the student on SHADEGR and no diploma record exists on SHADIPL. Updates will insert diploma records in SHADIPL and optionally insert ceremony records on SHACATT. Updates will take place, regardless of any holds the students may have. Once a SHADIPL record exists based on the search criteria entered, those records will not be presented by a search and cannot be updated using SHAMDIP.

Mass Update Ceremony Attendance Form (SHAMUCA)

You can search and update ceremony attendance records on SHAMUCA when a ceremony attendance record exists for the student on SHACATT.

Mass Update Diploma Form (SHAMUDI)

You can search and update diploma records on SHAMUDI when a diploma record exists for the student on SHADIPL. Records returned by the search can have the diploma record (SHADIPL) updated. Updates will take place, regardless of any holds the students may have. Updates will also take place whether or not data previously existed.

For more information about this enhancement, please refer to the *Banner 8 Student Release Guide*.

Self Check – Academic History Exercises

Exercise 1

Write a query which returns full name, id, level (the level code associated with gpa hours and calculations), and term gpa (for institutional work) for a given term. Prompt user for term.

Exercise 2

Write a query which returns full name, id, course level, crn, subject code, course number, and grades for a given term. Prompt user for term.

Exercise 3

Write a query which returns full name, id, level, all transfer courses, and grades for all students who have transfer work. Order by student last name.

Self Check – Academic History Exercises – Answer Key

Exercise 1

Write a query which returns full name, id, level (the level code associated with gpa hours and calculations), and term gpa (for institutional work) for a given term. Prompt user for term.

```
select  substr(spriden_last_name,1,15) || ', '  ||
          substr(spriden_first_name,1,15),
        spriden_id, shrtgpa_term_code,
          shrtgpa_levl_code, shrtgpa_gpa
  from  spriden, shrtgpa
 where  shrtgpa_pidm = spriden_pidm
   and  spriden_change_ind is null
   and  shrtgpa_term_code = '&term'
   and  shrtgpa_gpa_type_ind = 'I'
 order by spriden_last_name;
```

Exercise 2

Write a query which returns full name, id, course level, crn, subject code, course number, and grades for a given term. Prompt user for term.

The solution to this exercise contains some formatting as well as the select statement. You may introduce the formatting if there's time.

```
col     stunam      for a25     hea 'STUDENT NAME'
col     id          for a10     hea 'ID'
col     levl        for a5      hea 'LEVEL'
col     crn         for a6      hea 'CRN'
col     subj        for a6      hea 'SUBJ'
col     crse        for a6      hea ' CRSE |NUMBER'
col     grde        for a6      hea 'GRADE'
col     today       new_value   xtoday
col     term        new_value   xterm

ttitle -
             LE  xtoday -
             CE 'Student Grade Report for ' xterm -
             RI 'Page:  ' format 999 sql.pno -
             SKIP2

break -
             on stunam  nodup skip1 -
             on id      nodup -
             on id      nodup -
             on levl    nodup
select  substr(spriden_last_name,1,15) || ', ' ||
        substr(spriden_first_name,1,15) stunam,
        spriden_id id,
           shrtckl_levl_code levl,
        shrtckn_crn crn,
        shrtckn_subj_code subj,
        shrtckn_crse_numb  crse,
        shrtckg_grde_code_final grde,
        sysdate today,
        shrtckn_term_code term
  from  spriden, shrtckl, shrtckn, shrtckg
 where  shrtckg_pidm = spriden_pidm
   and  spriden_change_ind is null
   and  shrtckg_term_code = '&term'
   and  shrtckg_pidm = shrtckn_pidm
   and  shrtckg_term_code = shrtckn_term_code
   and  shrtckg_tckn_seq_no = shrtckn_seq_no
   and  shrtckg_pidm = shrtckl_pidm
   and  shrtckg_term_code = shrtckl_term_code
   and  shrtckg_tckn_seq_no = shrtckl_tckn_seq_no
 order  by 1,5,6;
```

Exercise 3

Write a query which returns full name, id, level, all transfer courses, and grades for all students who have transfer work. Order by student last name.

```
set pagesize 47
set linesize 130

col     stunam for a25  hea 'STUDENT NAME'
col     id     for a10  hea 'ID'
col     term   for a6   hea 'TERM'
col     subj   for a20  hea 'TRAN CRSE NAME'  TRUNC
col     crse   for a6   hea ' TRAN|CRSE |NUMBER'
col     titl   for a25  hea 'TITLE' TRUNC
col     grde   for a6   hea 'GRADE'

select  substr(spriden_last_name,1,15) || ', ' ||
          substr(spriden_first_name,1,15) stunam,
          spriden_id id,
             shrtrcr_term_code term,
             shrtrcr_trans_course_name subj,
        shrtrcr_trans_course_numbers crse,
        shrtrcr_tcrse_title titl,
             shrtrcr_trans_grade grde
  from  spriden, shrtrcr
 where  spriden_pidm = shrtrcr_pidm
   and  spriden_change_ind is null
 order by spriden_last_name,
             shrtrcr_term_code;
```

Conversion

Objectives

At the end of this section, you will be able to describe the conversion process.

Conversion Considerations

Considerations

- Keeping track of PIDM on legacy system
- Generated ID or SSN?
- Name/Address formatting
- Avoid “#” if using letter generation
- Additional data standards if using BannerQuest
- Address types
- Do you have Multiple ID’s on legacy system?

Conversion Steps

Steps

1. Document steps as you proceed
2. Review current data
3. Determine scope:
    - What will you convert?
4. Map legacy data to Banner tables
5. Write a detail plan of:
    - Data to be converted
    - Banner tables to be populated
    - Deadlines/timelines
6. Review plan & get approval from users
7. Develop procedures & programs
8. Test conversion in TEST or PPRD database
9. Users verify data
10. TEST again and make corrections to procedures and programs
11. Do conversion in production
12. Users verify data

Resources

Users can populate the validation tables, and can/will use some of the seed data.

Functional consultants may assist with the conversion process (mapping).

Refer to the Student Technical Reference Manual for more information on conversion topics:

- Chapter 5: Conversion
  Has good information regarding Accounts Receivable Data Conversion

- Chapter 6: Migration to Production
  Includes info about seed data that must be kept

- Chapter 7 : Integration
  Includes a list of Shared Tables, and has information about ethnicity codes and non-resident aliens

- Chapter 8: Process Flow Diagrams

Notes

Conversions can be automatic, manual or a combination of both.

Validation information can be keyed in by end-users. If RI is turned on, much error handling does not have to be built into scripts or programs.

When doing a conversion, keep in mind that both form-based and table-based rules must be met.

Conversion Strategies

Strategies

- Create data standards, especially for names and addresses
  All offices need to agree to and document data standards

- Determine whether you will enter the data electronically or manually
  e.g., Some validation tables/forms can be entered manually in both the preproduction and production databases *if* the number of records is small (unlike STVSBGI!!)

- Determine which tables you will be using
  May be helpful to look at the forms with the users, then you will be able to determine the tables used

- Mapping legacy data to Banner
- Review the legacy to Banner mapping with the users
- Create a document programmers can use that tells how to convert the data
- Create a Conversion Plan document
- Review the steps that are involved to get to your “go live” dates
- Create a time line
- Determine the processes that need to be written
- Will data need to be translated?
- Will data need to be cleaned up on legacy side?

If error handling is built into programs, then RI can be turned off.

Seed Data

Values

Chapter 6 of the Student Technical Reference Manual lists all validation table values that must be kept in production.

If the **System required indicator** = 'Y', this does not mean one must use this information. Most of this information is needed by external reports to third parties (e.g. IPEDS).

Conversion Examples

Examples

The following examples will demonstrate how to:

- Convert data to three Banner tables
- Create, drop, and alter temporary tables
- Assign a pidm
- Use SQL*LOADER to load temporary tables
- Use Update statement and Decode function to do cross-walk (translation)
- Use Insert statement
- Use a shell script or command procedure
- Check the data when complete
- Clean up data if it is incorrect

Flat file

The examples will use a flat file containing

- Person's (student's) SSN
- Last name
- First name
- Street
- City
- State
- Zip
- Sex
- Birth date

Information converted

We will convert basic general person information:

- Person Identification/Name Table (SPRIDEN)
- General Person Table (SPBPERS)
- Address Information Table (SPRADDR)

Conversion Example: Flat File Layout

Layout

```
210009506Abbe     Anthony       PO Box 21049       Malvern        PA19355226-MAR-77
610009711Abbot    James         PO Box 27          Malvern        PA19355217-NOV-79
210009101Adams    Andrew        803 King Street    Malvern        PA19355210-DEC-72
610009101Adams    Anthony       20789 Lancaster Ln Clarksville    PA15122210-DEC-74
710000011Adams    Eugene        3400 Wendrow Way   University ParkPA16802201-JAN-01
210009619Barker   Clementine    83 Park Avenue     New York       NY10013128-APR-72
210009613Barker   James         854 Charlestown Pk King of PrussiaPA19401201-DEC-77
```

This layout is in columns, although comma delimited or quotation mark delimited can be used with SQL*LOADER (see manual for more information.)

Conversion Example: Create Statement

Code

```
Create temporary tables   (create_temp.sql):
spool create_tables
drop table sytiden;
drop table sytaddr;
drop table sytpers;
create table sytiden as select * from spriden where 1 = 2;
create table sytaddr as select * from spraddr where 1 = 2;
create table sytpers as select * from spbpers where 1 = 2;
spool off
```

Usage

First, create temporary tables based on the actual layout of the Banner table, then alter the table so that the pidm column could be null (not absolutely necessary – depends on method for creating the pidm). This example will not need a null pidm, but in later temp tables when the pidm already exists in Banner tables, it may be a good method for handling pidms.

Pidms may be created during the load process or after the data is loaded into the temp tables. The main thing here is to know how to create, alter, and drop tables. Drop is in the script so that if a .shl or .com is used, the process can be rerun. (i.e., drop all tables, then recreate them) -- Not mandatory.

Remember when a table is dropped, all of the data is lost. In a production situation, a backup of the completed temp table should be made before manipulating the data in the temp table and running the process.

Conversion Example: Alter Statement

Code

```
Alter temporary tables   (alter_temp.sql):
spool alter_tables
alter table sytiden modify spriden_pidm null;
alter table sytaddr modify spraddr_pidm null;
alter table sytpers modify spbpers_pidm null;
spool off
```

Usage

Alter the table so that the pidm column could be null (not absolutely necessary – depends on method for creating the pidm). This example will not need a null pidm, but in later temp tables when the pidm already exists in Banner tables, it may be a good method for handling pidms.

For example, if HR has been converted, but you know some HR general person records are students, then you can get the pidm from Banner before proceeding.

General student

If general person records have been created for students and you are now doing general student information:

```
update sytiden y
   set y.spriden_pidm =
         (select distinct x.spriden_pidm
            from spriden x
           where y.spriden_id = x.spriden_id);
```

You can then alter the temporary table used for general student information to include an id:

```
update sytstdn
   set sytstdn_pidm =
        (select distinct spriden_pidm
           from spriden
          where spriden_id = sytstdn_id);
```

Conversion Example: SQL*LOADER

Code

SQL*LOADER (load.ctl):

```
load data
infile 'data_file.dat'
badfile 'bad_data.txt'
discardfile 'discard_file.txt'
append
into table sytiden (
spriden_pidm       sequence(77777777,1),
spriden_id              position(1:9),
spriden_last_name  position(10:23),
spriden_first_name position(24:39),
--  spriden_change_ind  null,
spriden_entity_ind constant 'P',
spriden_activity_date   constant '25-DEC-98',
spriden_user       constant 'CONVERSION',
spriden_origin          constant 'CONVERSION')
into table sytaddr (
spraddr_pidm       sequence(77777777,1),
spraddr_atyp_code    constant 'MA',
spraddr_seqno      constant '1',
spraddr_street_line1    position(40:58),
spraddr_city       position(59:73),
spraddr_stat_code  position(74:75),
spraddr_zip        position(76:80),
spraddr_activity_date   constant '25-DEC-98',
spraddr_user       constant 'CONVERSION')
into table sytpers (
spbpers_pidm       sequence(77777777,1),
spbpers_ssn          position(1:9),
spbpers_sex        position(81:81),
spbpers_birth_date position(82:90),
spbpers_activity_date   constant '25-DEC-98')
```

Usage

This example of SQL*LOADER includes a method for assigning a pidm.

The starting integer is determined after checking the Banner database for the max (and min) spriden_pidm. 77777777 is used in this example.

The data in the flat file is in columns; however, the loader can be written to use comma or quotation delimited files. The default is APPEND (so it is optional) and the discardfile is optional.

The activity date could be sysdate rather than a constant, but using a date like 25-DEC-97 stands out as a “conversion” date.

Spriden_change_ind will be null by default (note that it is commented out).

Notes

If one record does not load for some reason -- i.e., the data in the column is out of alignment, then none of the data will load into the temp table for that record, but the sequence number (pidm) will be preserved.

The log from the loader will indicate which record didn’t load. The bad data file will also show which records didn’t load and could be edited to use with the next load of data.

Verification

- Verify that the number of records loaded match the number in the data file.
- Review the log file.
- Check that pidms were assigned properly.
- Were all NOT NULL columns filled?

Conversion Example: Decode Statement

Code

Decode SPBPERS_SEX (decode_sex.sql):

```
spool decode
update sytpers
set spbpers_sex = decode (spbpers_sex,
  ‘1','F','2','M','N');
spool off
```

Usage

This is an example of using the update statement to decode a value in the sytpers temp table. This script is run after the temp table is loaded. A simple example of how cross-walking can be done within the temp table rather than on the legacy side. (Whichever is easier for you!)

Conversion Example: Check data in the temp tables

Code

```
   select     spriden_id,substr(spriden_last_name,1,15)||
         ',                          '||
              spriden_first_name, spriden_change_ind IND,
           spriden_entity_ind ENT,
           spriden_activity_date, spriden_pidm,
           spraddr_pidm, spbpers_pidm,
           spraddr_street_line1, spraddr_city,
           spraddr_stat_code, spraddr_zip, spbpers_sex,
spbpers_birth_date
     from      sytiden, sytaddr, sytpers
   where      spriden_pidm = spraddr_pidm
     and      spriden_pidm = spbpers_pidm
    order by   spriden_pidm;
```

Usage

Check the data in the temporary tables. This is just one example of a simple script to use for checking.

Conversion Example: Insert Statement

Code

```
Insert into SATURN tables  (insert_real.sql):
spool insert_real
insert into spriden select * from sytiden;
insert into spraddr select * from sytaddr;
insert into spbpers select * from sytpers;
spool off
```

Usage

Now insert the data into the “real” Banner tables.

Review the .lst file and verify that all records were inserted.

Conversion Example: Check the data in Banner

Code

```
select    spriden_pidm, substr(spriden_last_name||',’
                ||spriden_first_name,1,25),
                 spriden_entity_ind, spraddr_atyp_code,
                 spraddr_seqno, spraddr_street_line1,
                 spraddr_city, spraddr_stat_code,
                 spraddr_zip, spbpers_sex,
                 spbpers_birth_date
    from    spraddr, spbpers, spriden
   where    spriden_pidm > 77777776
     and    spriden_pidm = spraddr_pidm
     and    spriden_pidm = spbpers_pidm
order by    spriden_pidm;
```

Usage

Data is now in the Banner tables and should be reviewed before proceeding.

Notice the search and soundex columns that are now in SPRIDEN.

Write some scripts to look at the data in Banner.

Conversion Example: Update SOBSEQN

Code

```
update sobseqn
   set sobseqn_maxseqno = 77777783,
       sobseqn_activity_date = sysdate
 where sobseqn_function = 'PIDM';
```

Usage

Provided all is well with the insert and the data looks good, then SOBSEQN needs to be updated with the appropriate pidm that was last used and the activity date.

There may be cases where the pidm range for student records is lower than a product that was previously converted (e.g., human resources may have a higher pidm range).

Conversion Example: Clean the data in Banner

Code

Clean SATURN tables (clean_tables.sql):

```
spool clean_tables
delete from spriden where spriden_pidm > 77777776;
delete from spraddr where spraddr_pidm > 77777776;
delete from spbpers where spbpers_pidm > 77777776;
spool off
```

Usage

Clean the “real” Banner tables if the data was not inserted correctly or you wish to rerun the process. (clean_tables.sql)

For this example, we will clean out the data we inserted into Banner.

In a test and production environment, you may need to delete all or some records if they are inaccurate or invalid. By looking at the activity date in each table or the pidm range, records can be deleted.

Notes

Some versions of sql*loader will permit the use of a sequence. In this case, instead of using sequence(77777777,1) use myseq.nextval and myseq.currval. A sequence would need to be created.

```
create sequence for PIDM   (create_seq.sql):
spool sequence
drop sequence myseq;
create sequence myseq
  increment by 1
  start with 77777777;
spool off
exit
```

Conversion Example: Shell script

Code

Shell Script (convert.shl):

```
export ORAENV_ASK=NO
export ORACLE_SID=YOURSID
. oraenv

sqlplus saturn/u_pick_it @create_temp
sqlplus saturn/u_pick_it @alter_temp
sqlldr saturn/u_pick_it control=load.ctl
sqlplus saturn/u_pick_it @decode_sex
sqlplus saturn/u_pick_it @insert_real
```

Usage

After verifying that each script works properly, the scripts can be combined into a shell script (for UNIX) or a command file (for VMS).

Your shell script may look differently depending on your operating system. Check with your system administrator.

Notes

Each script (i.e., create_temp) will need to have 'exit' at end:

```
spool create_tables
drop table sytiden;
drop table sytaddr;
drop table sytpers;
create table sytiden as select *
                          from spriden
                         where 1 = 2;
create table sytaddr as select *
                          from spraddr
                         where 1 = 2;
create table sytpers as select *
                          from spbpers
                         where 1 = 2;
spool off
exit
```

APIs

Objectives

At the end of this section, you will be able to locate the APIs used in Banner Student.

Introduction

Overview

Application Programming Interfaces (APIs) are used to facilitate the integration of Banner with other applications on campus and simplify code by encapsulating business logic in database packages. An API is a central program that creates, updates, and deletes data. APIs also execute and validate business rules before inserting or updating information.

API Disclaimer

Warning**:** Please be advised that several APIs are currently intended to only support internal operations. To ensure data integrity, these APIs are not supported when called by external applications or interfaces to manipulate data. The recommendation for external applications is to use message level integration to integrate with these entities in Banner.

The following APIs come under this disclaimer:

- gb_stvterm
- sb_course_registration
- sb_enrollment
- sp_grading

APIs Used in Banner Student

The following tables and forms use APIs to process data in Banner Student. The form listed next to the table in this chart is the representative source used to build the API validation and business rules. The APIs replace the corresponding code in the Banner forms.

All APIs and packages used in Banner Student will begin with an 's,' followed by a 'b' and an underscore '_,' followed by a verb/noun describing what the API does. If the 2nd letter is a 'p' instead of a 'b,' then that database package is a Business Process API defining a 'unit of work'. Some Student API packages that are shared across other Banner Modules may begin with a 'g' instead of an 's'.

Note**:** Most of the APIs support create, update, and delete signatures. Exceptions, such as queries, are noted under Task Performed.

Table	Form	API Object Name	API Entity Name	Task Performed
SARADAP	SAAADMS	sb_admissionsapplication	ADMISSIONSAPPLICATION	Maintains admissions applications
SARAPPD	SAAQUIK, SAKDCSN	sb_application_decision	APPLICATION_DECISION	Used in application decision process to consider separate decision codes on multiple applications for the same applicant within the same term.
SCBCRSE	SCACRSE	sb_course	COURSE	Maintains basic course catalog information
SCRINTG	SCADETL	sb_catlg_integration_partner	CATLG_INT_PARTNER	Maintains courses for integration partners process
SFBETRM	SFAREGS	sb_enrollment	ENROLLMENT	Maintains learner enrollment status
SFRENPO	SFAEPRT	sb_enr_ver_payment	ENR_VER_PAYMENT	Defines special payment detail code options available for processing self-service enrollment verification requests
SFRENSS	SFAEPRT	sb_enr_ver_services	ENR_VER_SERVICES	Defines special services available for processing self service enrollment verification requests

Table	Form	API Object Name	API Entity Name	Task Performed
SFRSTCR	SFAREGS	sb_course_registration	REGISTRATION	Queries student course registration records
SFRSTCR	N/A	sp_grading	GRADING	Supports the existing midterm and final grade exchange between WebCT and Banner
SGBSTDN	SGASTDN	sb_learner	LEARNER	Maintains learner information
SHBHEAD	SHRPESI	sb_edi_header	EDI_HEADER	Accesses imported XML transcript records for the document master header record
SHRASES	SHRPESI	sb_edi_acad_sess	EDI_ACAD_SESSION	Loads imported XML transcript academic session data into SHRASES
SHRAUDE	SHAEDIS, SHRPESI	sb_edi_acrec_ude	EDI_ACREC_UDE	Accesses imported XML transcript records for academic record UDE data
SHRCRSR	SHRPESI	sb_edi_course	EDI_COURSE	Accesses imported XML transcript records for course UDE data
SHRDGMR	SHADEGR	sb_learneroutcome	LEARNEROUTCOME	Maintains program outcome, degree, and award information
SHREDIS	SHRPESI	sb_edi_status	EDI_STATUS	Accesses imported XML transcript records for EDI status data
SHREPTD	SHRPESI	sb_pesc_status_export	PESC_STATUS_EXPORT	Accesses imported XML transcript records for transcript export status
SHRHDR4	SHRPESI	sb_edi_doc_header	EDI_DOC_HEADER	Accesses imported XML transcript records for the document identification header

Table	Form	API Object Name	API Entity Name	Task Performed
SHRIDEN	SHRPESI	sb_edi_identification	EDI_IDENTIFICATION	Accesses imported XML transcript records for person identification data
SHRIPTD	SHRPESIW	sb_pesc_status_imp	PESC_STATUS_IMP	Accesses imported XML transcript records for transcript import status
SHRMEDI	SHREDIS, SHRPESI	sb_edi_medical	EDI_MEDICAL	Accesses imported XML transcript records for medical data
SHRSTSC	SHAEDIS, SHRPESI	sb_edi_subtest_score	EDI_SUBTEST_SCORE	Accesses imported XML transcript records for subtest score data
SHRSTST	SHAEDIS, SHRPESI	sb_edi_subtest	EDI_SUBTEST	Accesses imported XML transcript records for subtest data
SHRSUDE	SHAEDIS, SHRPESI	sb_edi_stud_ude	EDI_STUD_UDE	Accesses imported XML transcript records for student UDE data
SHRSUMA	SHRPESI	sb_edi_acad_summ	EDI_ACAD_SUMM	Loads imported XML transcript academic summary data into SHRSUMA
SHRSUMS	SHRPESI	sb_edi_acad_sess_sum	EDI_ACAD_SESS_SUM	Loads imported XML transcript academic session summary data into SHRASES
SHRTEST	SHAEDIS, SHRPESI	sb_edi_test	EDI_TEST	Accesses imported XML transcript records for test data
SHRTRNM	SHATPRT	sb_transcript_name	TRANSCRIPT_NAME	Defines name to be printed on transcript for name hierarchy and transcript type

Table	Form	API Object Name	API Entity Name	Task Performed
SHRTRNM	SHARQTC	sb_transcript_req_name	TRANSCRIPT_REQ_NAME	Identifies name hierarchy for transcript request
SHRTRNS	SHRTRNS	sb_transcript_name_source	TRANSCRIPT_NAME_SOURCE	Maintains restrictions for name sources available for selecting names to be printed on transcript
SHRTUDE	SHAEDIS, SHRPESI	sb_edi_trans_ude	EDI_TRANS_UDE	Accesses imported XML transcript records for transcript UDE data
SIBINST	SIAINST	sb_faculty	FACULTY	Maintains faculty member and advisor information
SIRASGN	SIAASGN	sb_facassignment	FACULTYASSIGNMENT	Maintains course assignments for a faculty member or advisor
SLRBMAP	SLARMAP	sb_roompreference	ROOMPREFERENCE	Maintains dorm room and meal plan applications
SLRMASG	SLAMASG	sb_mealassignment	MEALASSIGNMENT	Maintains meal assignments
SLRPASG	SLAPASG	sb_phoneassignment	PHONEASSIGNMENT	Maintains telephone assignments
SLRRMAT	SLARMAT	sb_roommate	ROOMMATE	Maintains roommate applications
SOBCACT	SORCACT	sb_learnercurricstatus	LEARNERCURRICSTATUS	Maintains learner curriculum activity and status rules
SOBLMOD	SOACTRL	sb_learnermodule	LEARNERMODULE	Maintains learner module rules
SOBTERM	SOATERM	sb_term	TERM	Maintains controls for a specific term - no create allowed, only update and delete
SORDLIM	SORDLIM	sb_datafile_delimiter	FILEDELIMETER	Maintains datafile file delimeters

Table	Form	API Object Name	API Entity Name	Task Performed
SORLCUR	SOQOLIB	sb_curriculum	CURRICULUM	Maintains learner curriculum information
SORLFOS	SOQOLIB	sb_fieldofstudy	FIELDOFSTUDY	Maintains learner curriculum field of study information
SORLMFS	SOACTRL	sb_fieldofstudy_allowed	FIELDOFSTUDY_ALLOWED	Defines maximum current/active field of study allowed for a curriculum and learner module, for use with enrollment verification/ transcript self-service delivery options
SORTSPC	SOATEST	sb_test_percentile	TEST_PERCENTILE	Maintains student test score percentile details for master test records in SORTEST
SRBRECR	SRARECR	sb_recruit	RECRUIT	Maintains prospective applicant information
SRRTPTS	SRATPTS	sb_datafile_test_score	FILETESTSCORE	Maintains date origins for STVTESC codes
SSBSECT	SSASECT	sb_section	SECTION	Maintains the schedule of classes as defined in the course catalog
STVCKSR	SAAADMS, SAAACKL	sb_stvcksr	CHECKLIST_SOURCE	Tracks source of checklist items.
STVCKST	SAAADMS, SAAACKL	sb_stvckst	CHECKLIST_STATUS	Tracks status of checklist items.
STVTRNS	STVTRNS	sb_stvtrns	SB_STVTRNS	Houses cursors/functions to retrieve validation table data from transcript name source

APIs Used in Banner General with Student Forms and Tables

APIs Used in Banner General with Student Forms and Tables

The following Student tables and forms use APIs to process data in Banner General and Banner Student.

Table	Form	API Object Name	API Entity Name	Task Performed
SLBBLDG	SLABLDG	gb_bldgdefinition	BLDGDEFINITION	Maintains building information
SLBRDEF	SLARDEF	gb_roomdefinition	ROOMDEFINITION	Maintains room information by building
SLRRASG	SLARASG	gb_roomassignment	ROOMASSIGNMENT	Maintains dorm room assignments
SORCONC	SIAFDEG, SOAPCOL	gb_pcol_conc	PCOL_CONCENTRATION	Maintains a person's educational background, including institutions attended, degrees received at each institution, and majors, minors, and areas of *concentration* at each institution
SORDEGR	SAADCRV, SIAFDEG, SOAPCOL, SRAQUIK	gb_pcol_degree	PCOL_DEGREE	Maintains a person's educational background, including institutions attended, *degrees* received at each institution (majors, minors, and areas of concentration)
SORMAJR	SIAFDEG, SOAPCOL	gb_pcol_major	PCOL_MAJOR	Maintains a person's educational background, including institutions attended, degrees received at each institution (*majors*, minors, and areas of concentration)

Table	Form	API Object Name	API Entity Name	Task Performed
SORMINR	SIAFDEG, SOAPCOL	gb_pcol_minor	PCOL_MINOR	Maintains a person's educational background, including institutions attended, degrees received at each institution majors, *minors*, and areas of concentration)
SORPCOL	SAADCRV, SHAEDIS, SIAFDEG, SOAPCOL, SRAQUIK	gb_pcol	PRIOR_COLLEGE	Maintains a person's educational background, including institutions attended, degrees received at each institution (majors, minors, and areas of concentration)
SPBPERS	SPAPERS	gb_bio	IO	Maintains biographic/ demographic information for an individual
SPRADDR	SPAIDEN	gb_address	ADDRESS	Maintains address information
SPREMRG	SPAEMRG	gb_emergency_contact	EMERGENCY_CONTACT	Maintains emergency contact information for an individual
SPRHOLD	SOAHOLD	gb_hold	HOLD	Places or removes holds on an account
SPRIDEN	SPAIDEN	gb_identification	IDENTIFICATION	Maintains person and nonperson biographic/demographic information
SPRMEDI	GOAMEDI	gb_medical	MEDICAL	Maintains information about medical conditions of people at your institution, including students, faculty, and staff

Table	Form	API Object Name	API Entity Name	Task Performed
SPRTELE	SPATELE	gb_telephone	TELEPHONE	Maintains telephone information
SSRMEET	SSASECT	gb_classtimes	CLASSTIMES	Maintains section and event meeting times
STVADMR	STVADMR	gb_stvadmr	PRIOR_COLLEGE	Checks for existence of admission request code information for a prior college
STVHONR	STVHONR	gb_stvhonr	PCOL_DEGREE	Checks for existence of institutional honors for a prior degree
STVMEDI	STVMEDI	gb_stvmedi	MEDICAL	Checks for existence of medical information
STVPENT	STVPENT	gb_stvpent	VISA	Checks for existence of port of entry information
STVSBGI	STVSBGI	gb_stvsbgi	PRIOR_COLLEGE	Maintains general information, such as address, comments, and contacts, about a source or background institution for a prior college
STVTERM	STVTERM	gb_stvterm	STVTERM	Queries term validation information
STVVTYP	STVVTYP	gb_stvvtyp	VISA	Checks for existence of visa type record

Curricula Checking and APIs

The curriculum and field of study APIs are used to validate the curriculum according to the rules on SOACURR. An in and out parameter exists on the curriculum and field of study p_create APIs to override any raised failure and to return the severity level so the user interface can manage the message if necessary.

- If the override is blank or F, the API will abort if there is a fatal curriculum error, and the API error message handler will display the error.
- If the override value has a value of N (No Curriculum Checking), the API will not fail, and it will insert the data.

In all cases, the real severity level and error number are returned so the user interface can display any messages.

It should be noted that validation of curriculum elements occurs in the sb_curriculum and sb_fieldofstudy APIs, regardless of curriculum checking activity. The columns for level, college, degree, program, and campus data must be valid in their respective validation tables. The value entered in the field of study major must be valid on the STVMAJR table.

- If the field of study type is *MAJOR*, the valid major checkbox must be checked on the STVMAJR table.
- If the field of study type is *MINOR*, the valid minor checkbox must be checked.
- If the field of study type is *CONCENTRATION*, the valid concentration checkbox must be checked.
- If the field of study type is something other than the above three choices, the value must be valid on STVMAJR.

The following is a list of places where the curriculum data is checked and the type of error interaction that occurs as a result. If the API is allowed to fail, the object will display a standard Banner API error message window with the error.

Object	Banner Activity	Curriculum Checking	API Override Indicator
SRARECR	Insert new Recruiting curriculum data	Allow API failure if the curriculum is in error and the Recruiting severity level on SOACTRL is *F*. User interface will display a warning if severity level is a warning, but API will not fail.	*NULL*
SRAQUIK	Insert new Recruiting curriculum data	Allow API failure if the curriculum is in error and the Recruiting severity level on SOACTRL is *F*. User interface will display a warning if severity level is a warning, but API will not fail.	*NULL*
SRKPREL	Call sakmods. p_create_recruit	Do not perform any curriculum checking. Call p_create_recruit with an override to any curriculum checking and error reporting from the API.	*N*
SRKPREL	Call sakmods. p_create_application	Do not perform any curriculum checking. Call p_create_application with an override to any curriculum checking and error reporting from the API.	*N*
SAAADMS	Insert new Admissions curriculum data	Allow API failure if the curriculum is in error and the Admissions severity level on SOACTRL is *F*. User interface will display a warning if severity level is a warning, but API will not fail.	*NULL*

Object	Banner Activity	Curriculum Checking	API Override Indicator
SAAQUIK	Insert new Recruiting curriculum data	Allow API failure if the curriculum is in error and the Recruiting severity level on SOACTRL is *F*. User interface will display a warning if severity level is a warning, but API will not fail.	*NULL*
SAAQUIK	Insert new Admissions curriculum data	Allow API failure if the curriculum is in error and the Admissions severity level on SOACTRL is *F*. User interface will display a warning if severity level is a warning, but API will not fail.	*NULL*
SAAQUIK	Insert new Learner curriculum data	Allow API failure if the curriculum is in error and the Learner severity level on SOACTRL is *F*. User interface will display a warning if severity level is a warning, but API will not fail.	*NULL*
SAADCBT	Insert new Learner row when student is admitted	Display curriculum error in the message line for both fatal and warning errors. If there is a fatal error, abort the API, but not the remaining commit processing.	*NULL*
SAADCBT	Duplicate/change curriculum and activity statuses in Admissions fields of study, based on new admission application decision codes	Do not perform any curriculum checking.	*N*

Object	Banner Activity	Curriculum Checking	API Override Indicator
SAADCRV	Insert new Learner row when student is admitted	Allow API failure if the curriculum is in error and the Learner severity level on SOACTRL is *F*. User interface will display a warning if severity level is a warning, but API will not fail.	*NULL*
SAADCRV	Duplicate/change curriculum and activity statuses in Admissions fields of study, based on new admission application decision codes	Do not perform any curriculum checking.	*N*
SARBDSN	Call sakdcsn.p_process_decsn to insert new learner curriculum	Call sakdcsn.p_process_decsn with IN parameter to indicate API should not process curriculum errors.	*N*
SARBDSN	Duplicate active learner curriculum and field of study, and apply new curriculum status and activity status, if the student status code has different codes then those current on SORLCUR and SORLFOS	Do not perform any curriculum checking.	*N*
SARETMT	Call sakmods.p_create_recruit	Do not perform any curriculum checking. Call p_create_recruit with an override to any curriculum checking and error reporting from the API.	*N*
SAAEAPS	Call sakmods.p_create_recruit	Do not perform any curriculum checking. Call p_create_recruit with an override to any curriculum checking and error reporting from the API.	*N*

Object	Banner Activity	Curriculum Checking	API Override Indicator
SAKMODS	p_create_recruit	Use IN parameter in p_create_recruit to indicate if API should abend if a fatal curriculum error is found. Use OUT parameter in the procedure to return the first fatal error number found. If the user interface requires this should be processed, the error will exist and the processing can be halted.	Calling process sends appropriate value
SAKMODS	p_create_application	Use IN parameter in p_create_application to indicate if API should abend if a fatal curriculum error is found. Use OUT parameter in the procedure to return the first fatal error number found. If the user interface requires this should be processed, the error will exist and the processing can be halted.	Calling process sends appropriate value
SAKMODS	p_create_student	Use IN parameter in p_create_student to indicate if API should abend if a fatal curriculum error is found. Use OUT parameter in the procedure to return the first fatal error number found. If the user interface requires this should be processed, the error will exist and the processing can be halted.	Calling process sends appropriate value

Object	Banner Activity	Curriculum Checking	API Override Indicator
SAKDCSN	Call p_process_decsn procedure and f_create_learner function from SAADCRV, SAADCBT, SARBDSN, and SAKQADM to process admissions decisions and insert new learner curriculum. p_decision_processing calls sakdcsn.p_auto_decision which then calls p_process_decsn.	Use IN parameter to indicate if API should abend if a fatal curriculum error is found. Use OUT parameter in the procedure to return the fatal errors found. If the user interface requires this should be processed, the error will exist, and the processing can be halted. The SARBDSN process is the only one of the four that does not require processing curriculum errors and will send a value of *N* in the IN parameter to not process curriculum.	Calling process sends appropriate value
SAKL010	Insert application and curriculum data	Report curriculum error on SAAEAPS.	*S*
SGASTDN	Insert new Learner curriculum data	Allow API failure if the curriculum is in error and the Learner severity level on SOACTRL is *F*. User interface will display a warning if severity level is a warning, but API will not fail.	*NULL*
SGASTDN	Duplicate active curriculum and field of study data and apply new curriculum and activity statuses if the student status code is changed on SGBSTDN	Do not perform any curriculum checking.	*N*

Object	Banner Activity	Curriculum Checking	API Override Indicator
SFAREGS	Duplicate active curriculum and field of study data and apply new curriculum and activity statuses if the student status code is changed on SGBSTDN	Do not perform any curriculum checking.	*N*
SHADEGR	Insert new Outcome curriculum data	Allow API failure if the curriculum is in error and the Outcome severity level on SOACTRL is *F*. User interface will display a warning if severity level is a warning, but API will not fail.	*NULL*
SHADEGR	Duplicate active curriculum and field of study data and apply new curriculum and activity statuses if the degree status code is changed on SHRDGMR	Do not perform any curriculum checking.	*N*
SHKMODS	Insert outcome (degree) and curriculum	Do not perform any curriculum checking.	*N*
SHRDEGS	Update outcome with new degree status code. Go to duplicate active curriculum and field of study and apply new curriculum status and activity status, if they are different from previous versions.	Do not perform any curriculum checking.	*N*
SHRDEGS	Duplicate active curriculum and field of study data and apply new curriculum and activity statuses if the student status code is changed on SGBSTDN	Do not perform any curriculum checking.	*N*

Object	Banner Activity	Curriculum Checking	API Override Indicator
SHRTYPE	Update or insert learner with new student status. Go to duplicate active curriculum and field of study and apply new curriculum status and activity status, if they are different from previous versions.	Do not perform any curriculum checking.	N
SOKLCUR	Convert curriculum data on SRBRECR, SARADAP, SGBSTDN, and SHRDGRM to SORLCUR and SORLFOS.	Do not perform any curriculum checking.	
BWSKXMIS -Self-Service	If a student updates their major for the same curriculum, the curriculum is copied to a new term, and all other fields of study are copied forward. If curriculum is turned on, the new major comes from the list of valid majors on SOACURR that are part of the curriculum.	Do not perform any curriculum checking.	N

Curriculum Conversion Using Functions and APIs

Curriculum Conversion Using Functions and APIs

Four of the functions in package SOKLCUR (f_convert_recruit, f_convert_applicant, f_convert_learner, and f_convert_outcome) are used to call APIs to perform the insert activity.

The functions can be launched from a batch process or when the a form with curriculum data is initially opened at your institution. This includes: SRARECR, SRAQUIK, SAAADMS, SAAQUIK, SGASTDN, SFAREGS, and SHADEGR. These forms will check to see if the curriculum data has been converted, and if it has not, the function will be executed for the PIDM.

The table below explains how the functions convert the curriculum data using APIs.

Function Name	Table Read	Conversion Step	API Task	Data Converted into Table
f_convert_recruit	SRBRECR	Convert primary curriculum	Insert recruiting curriculum base	SORLCUR
			Insert recruiting curriculum study entry	SORLFOS
f_convert_applicant	SARADAP	Convert primary curriculum	Insert admissions curriculum base	SORLCUR
			Insert admissions curriculum study entry	SORLFOS
		Convert secondary curriculum	Insert admissions curriculum base	SORLCUR
			Insert admissions curriculum study entry	SORLFOS
f_convert_learner	SGBSTDN	Convert primary curriculum	Insert learner curriculum base	SORLCUR
			Insert learner curriculum study entry	SORLFOS
		Convert secondary curriculum	Insert learner curriculum base	SORLCUR
			Insert learner curriculum study entry	SORLFOS
f_convert_outcome	SHRDGMR	Convert primary curriculum	Insert history curriculum base	SORLCUR
			Insert history curriculum study entry	SORLFOS
		Convert secondary curriculum	Insert history curriculum base	SORLCUR
			Insert history curriculum study entry	SORLFOS