Objective:
1. Convert current chip based card to magnetic strip card by Fall, 2013
2. Replace all staff and student ID cards currently being issued by both campuses.

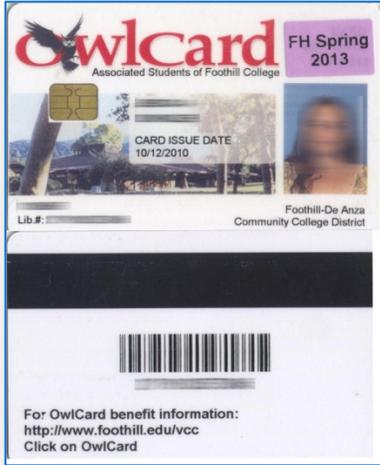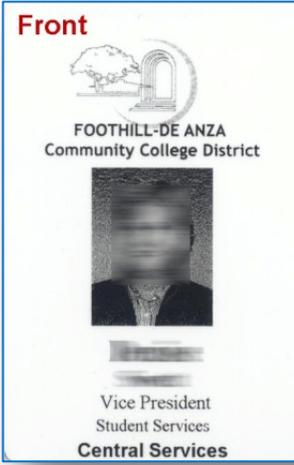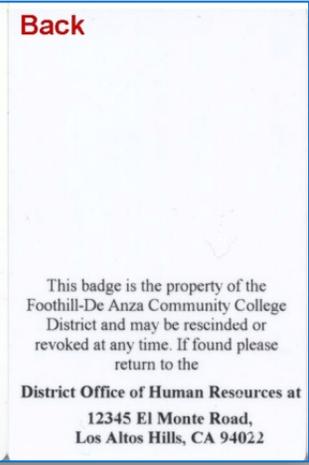# Survey of Current Cards

"X" indicates the item is present

Foothill College Smart Shop	Orientation	Mag Strip?	Photo	Name	Title	CWID #	Location	Issue Date	Expire date	Other	Printed on back	Comments
			Printed on Front									
Student Body Card	Landscape	Yes	X	X		X	College	X	Valid Qtr	Library	Library ID Bar Code Link to Benefits	
Foothill Faculty/Staff	Landscape	No	X	X			College		1 yr "June yyyy"		blank	
Central Services Staff	Portrait	No	X	X	X		Dept.		None		Return text	
Allied Health Students	?											Name tag
Palo Alto University Students	Portrait	No	X	X			Major		Yes		blank	Not our students
Campus Center Team For Students working in Bookstore & Smart Shop	Portrait	No	X	X					None		blank	Name tag
Design Center	Portrait	No		X					None		blank	Name tag
For FHDA Police*												
Police Officer Card	Landscape	No	X	X	X			On back	On back	ID #	Description & finger print, signed	Police will take control of these two cards,
Electric Car Driving Permit	Landscape	No	X	X				On back		Text	Issue Date & Text	
(* FHDA Police would like to take over production of these two cards)												

Allied Health Programs:

Dental Assisting	Dental Hygiene	Diagnostic Medical Sonography
Emergency Medical Technology	Paramedic	Pharmacy Technician
Primary Care Associate	Respiratory Therapy	
Veterinary Technology	Veterinary Assistant	

Foothill Card Samples

Student Body Card		Central Services Staff		Foothill Faculty/Staff	
Student Body Card		**Central Services Staff**		**Foothill Faculty/Staff**	
Campus Center Team		**Palo Alto University Students**		**Design Center**	
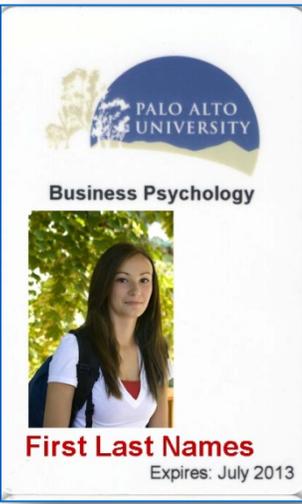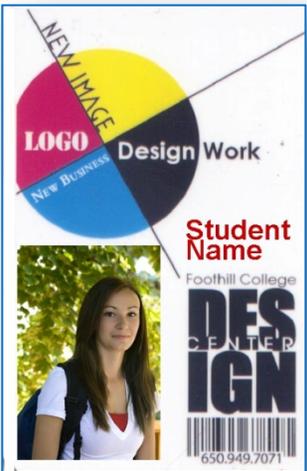
"X" indicates the item is present

De Anza Student Card Office			Printed on Front									Printed on back	Comments
	Orientation	Mag Strip?	Photo	Name	Title	CWID #	Location	Issue Date	Expire date	Other			
Student Body Card	Landscape	Yes	X	X		X	College	X	X	Library ID# & Bar Code	blank	ECO Pass sticker on back
Staff ID Card	Portrait	No	X	X			Dept.& College		None		Return text	
Nursing Student Card	Landscape	No	X	X	Nursing Student		College		None		blank	Name Tag 30 students/qtr
Health Technologies Programs Student	Landscape	No	X	X	Student		College	On back	None	Program**	blank	Name Tag 400 students total
Clipper Card	Landscape	No	X	X							Cards provided by VTA	NFC reader to read Card numbers for entry into the ID Card system

List of Health Technologies Programs
- Medical Assisting
- Phlebotomy
- Lab Assisting
- Medical File Clerk
- Medical Records Clerk
- Business Office Clerk
- Medical Reception
- Medical Transcription
- Medical Secretary

Medical Lab Technician Program may also require a Name tag card

De Anza Card Samples
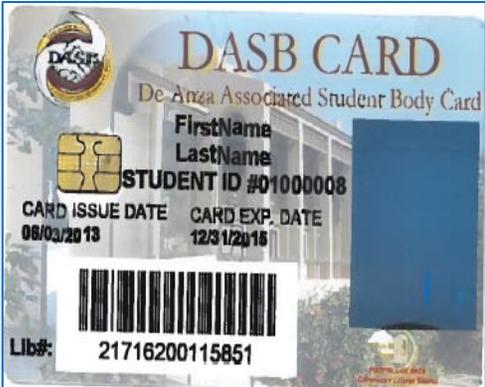
Student Body Card		**Staff ID**		**Clipper Card**	
Nursing Student Card		**Health Technologies Programs Student**			
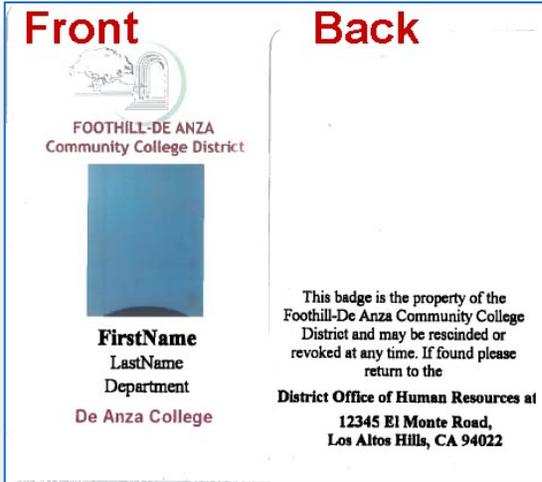
Staff Cards

Agreed:

- All Staff Cards will be formatted the same district wide.
- A new card will issued when the employee changes positions resulting in a new title. Old cards will be collected by ?.
- Staff cards will be collected from employees who are leaving their employment at the district during their exit interview.
- Card will have magnetic strip formatted as specified in this document.
- Cards will be produced by Card shops on both campuses using district wide template.
- Orientation will be portrait as one way to differentiate between Staff and Student cards.

Printed on Front:

- Bar code of CWID (to allow staff to use libraries). Do not print CWID that corresponds to bar code.
- Photo
- First Name (in a larger font size) - Senior staff requested that the first name is printed in a larger size font.
- Last Name
- Title
- Expiration Date – three years from issue date (issued every three years which is same as new parking permits)
- Foothill – De Anza Community College District

Back (can be pre-printed):

- Text stating Property of FHDA & how to return if found:
  - "This badge is the property of the Foothill-De Anza Community College District and may be rescinded or revoked at any time. If found please return to the District Office of Human resources at 12345 El Monte Road, Los Altos Hills, CA 94022"
- Text stating person is Disaster Services Worker
  - "The Bearer of this identification is a DISASTER SERVICE WORKER and may be on official business in response to an emergency or disaster situation. If safety permits, please allow passage to their destination. CA Govt Code 3100-3109"
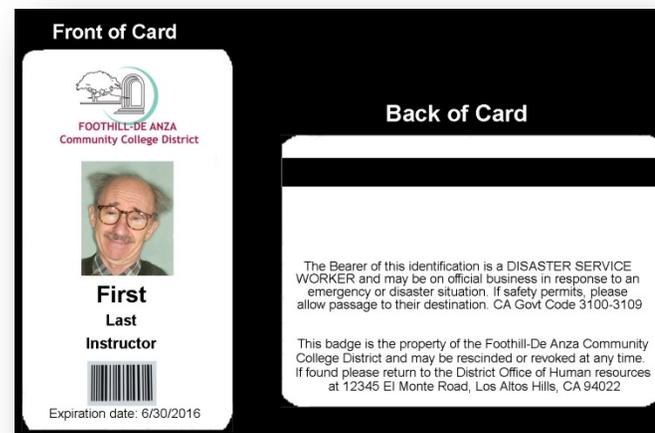
Sample Staff Card layout:

Student Cards
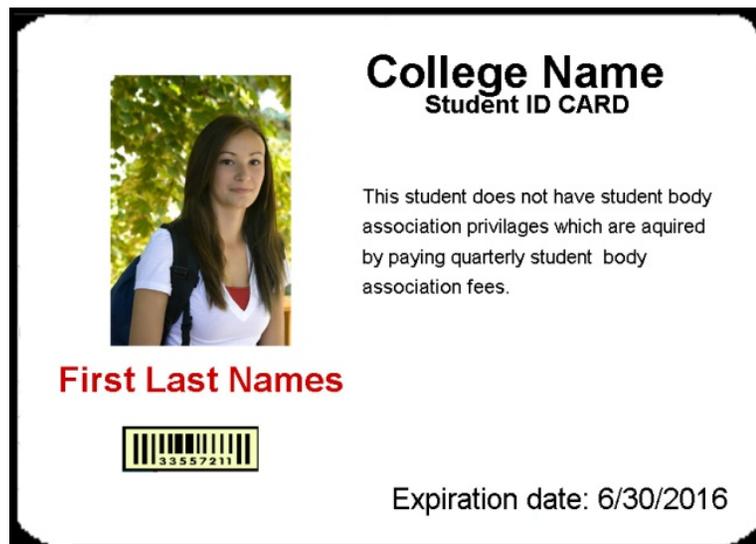
Agreed:

- All students (except 100% distance learning students who do not come on campus) will be issued a student id card.
- There will be two flavors of student ID cards, Basic and Student Body cards for students who have paid their student body fees.
- Students who have paid their fees will get a student body card for the college where they have paid their fees. Students who paid student fees to both colleges will be issued two student body cards. The two types of cards must be radically different so that students don't try to use the Basic student card for activities and discounts only available to students with an Official Student Body Card.
- Orientation will be Landscape as one way to differentiate between Staff and Student cards.

Printed on Front:

- Bar Code of Student's ID # to allow use of library (bar codes that cannot be copies can be generated and printed on the cards) – Libraries need to agree and then provide bar code format to be used.
- Student Photo
- Student Name will be the same name that appears on the faculty roster. It will include a middle name to accommodate international students
- College Name – where student is registered
- Expiration Date – will be three years from date of card is issued. Student body cards are used for discounts and businesses like to see an expiration date printed on the card.
- Only students who have paid their student body fees will get Student Body Card.

Sample Basic Student ID Card:

College Name
Student ID CARD

This student does not have student body association privilages which are aquired by paying quarterly student body association fees.

First Last Names

33557211

Expiration date: 6/30/2016

Name Tag Cards

- Printed on blank cards without a mag strip.
- Printed as specified by requesting program.
- Card printing system will retrieve student's name and photo to be printed on the front of the card.
- Student can request that their legal name rather than preferred name be printed on Name Tag Card.
- The issuance of X type card will be recorded in Banner database.
- Process to request cards and payment for card production will be worked out on each campus between the card printing shop and the requesting organization.

Inventory of Cards to be produced by De Anza Office of College Life:

Card Code	Card Name/Description	Mag Stripe	Bar Code	Expiration* in days	Preferred/ Legal Name*	Middle Name*	Notes
DASB	DASB Card	Y	Y	1095	Preferred	Y	
DASI	Generic DA Student Card	Y	Y	1095	Preferred	Y	May be replaced by a District Wide Generic FHDA Student Card (FDSI perhaps?)
CLIP	Clipper Card (District Wide)	N	N	NA	Legal	Y	
FHDA	Employee Cards (District Wide)	Y	Y	1095	Preferred	N	
DANU	DA Nursing Student Badge	N	N	1095	Legal	Y	
DAHT	DA Health Technologies Programs Student Badge	N	N	1095	Legal	Y	
DABO	DA Business Office Clerk Student Badge	N	N	1095	Legal	Y	
DAIN	DA Insurance and Coding Student Badge	N	N	1095	Legal	Y	
DALA	DA Lab Assisting Student Badge	N	N	1095	Legal	Y	
DAMA	DA Medical Assisting Student Badge	N	N	1095	Legal	Y	
DAFC	DA Medical File Clerk Student Badge	N	N	1095	Legal	Y	
DAMR	DA Medical Reception Student Badge	N	N	1095	Legal	Y	
DARC	DA Medical Records Clerk Student Badge	N	N	1095	Legal	Y	
DAMS	DA Medical Secretary Student Badge	N	N	1095	Legal	Y	
DAMT	DA Medical Transcription Student Badge	N	N	1095	Legal	Y	
DAPH	DA Phlebotomy Student Badge	N	N	1095	Legal	Y	
DALT	DA Medical Lab Technician Program Student Badge	N	N	1095	Legal	Y	

* I believe the expiration dates (3 years) and names to use were finalized at the team meetings and are in the specification prepared by Susan Malmgren,

and I'm fairly certain both campuses are supposed to use the same specifications.

Student & Staff Extract

This is an extract from Banner of student and staff data that is being sent to ePrintIt when a card is created. It contains for each student and staff:

- CWID
- Password – CWID will be the default password
- First Name
- Last Name
- Middle Name
- Role
- Email Address
    - Staff email will be FHDA address
    - Students, student employees and temporary employees the email address will be their Preferred Personal email address, never an FHDA address
- Card Activity
- Balance
- Card # if active

Physical Card Media

Card Dimensions

- Standard: ISO/IEC 7810
- 85.60 × 53.98 mm

Magnetic Stripe

- Standard: ISO/IEC 7813
- Up to 3 tracks of data
    - o Track 1
        - Total maximum track length: 79 alphanumeric characters
        - Start marker: "%"
        - Delimiter between fields: "^"
        - End marker: "?"
        - PAN - Primary Account Number
            - Student / Employee CWID
            - 19 characters maximum
        - NM - Cardholder Name
            - Unused
            - Use minimum 2 blank characters as fil
        - ED - Expiration Data
            - Card Expiration MMYY (Month + Year)
            - 4 characters maximum
        - SC - Service Code
            - Unused
        - DD - Discretionary Data
            - Card security Code (4 characters)
    - o Track 2 will not be used
    - o Track 3 will not be used

Track 1

Track 2

Track 3
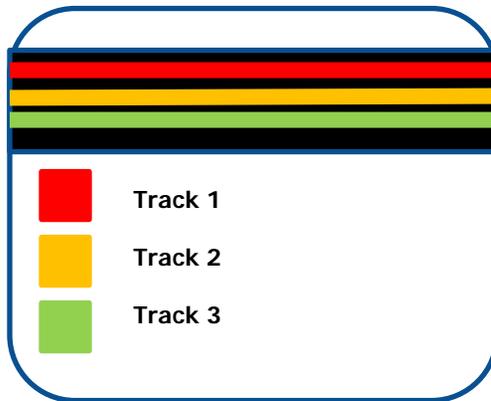
Barcode

- o Barcodes are only used by the libraries
- o Best to use same format for both colleges.
- o IDWorks supported barcodes:
  - Codabar
  - Code 128 – Auto
  - Code 128 A
  - Code 128 B
  - Code 128 C
  - Code 39
  - Code 39 Extended
  - Code 93
  - Code 93 Extended
  - EAN/JAN-13
  - EAN/JAN-8
  - HIBC
  - **Interleaved 2 of 5** – currently used by both libraries
  - MSI Plessey
  - PDF417
  - Postnet Zip+4
  - UCC128
  - UPCA
  - UPCE – 0 System 6 Digit
  - UPCE – 1 System 6 Digit
  - UPCE – 11 Digit
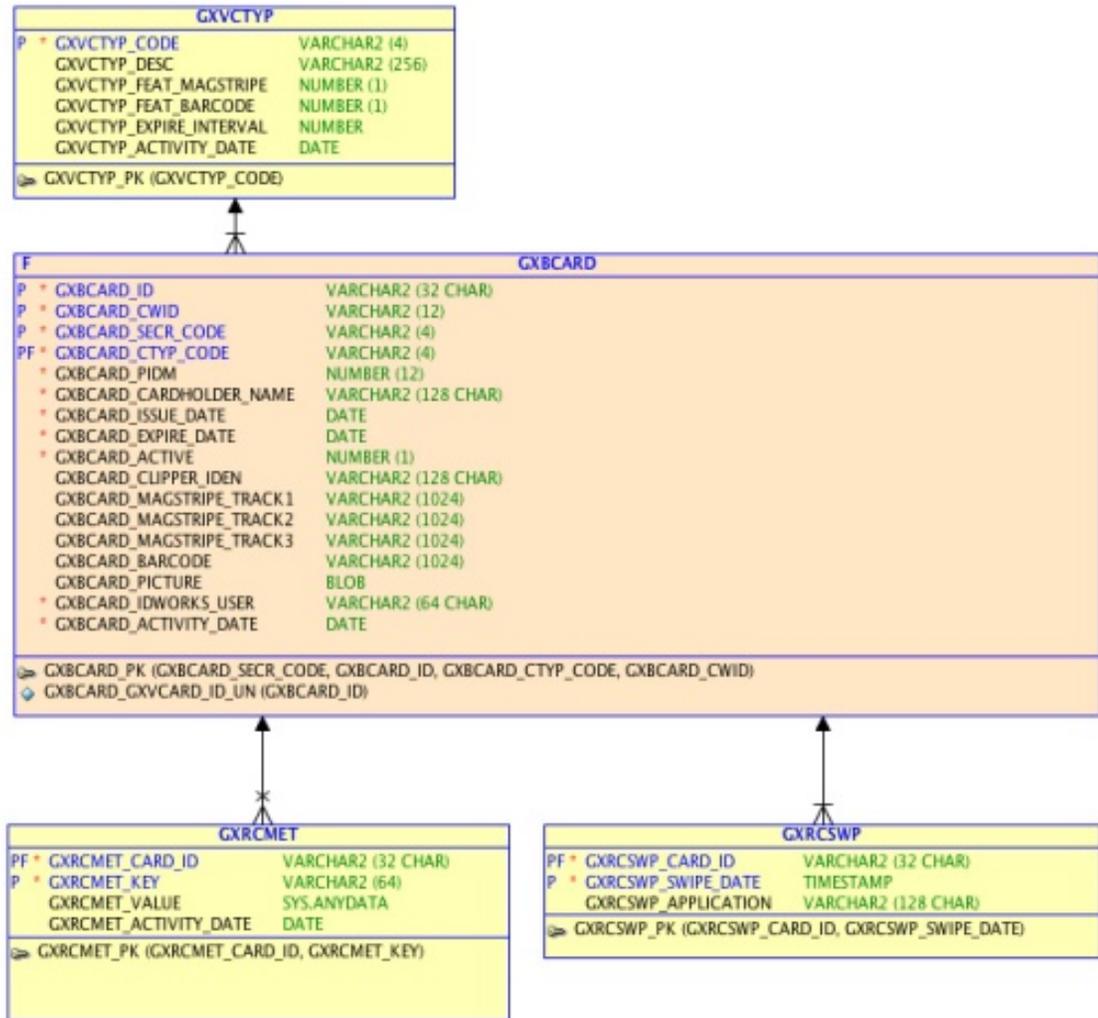
Banner File Updates and Format

Specification for how cardholder data should be stored in the Banner database.

1 Oracle Schema

2 Table Diagram

3 GXBCARD - Base Cardholder Table

4 GXVCTYP - Card Type Validation Table

5 GXRCSWP - Card Swipe Log

6 GXRCMET - Card Metadata

7 Internal Card Identifier Algorithm

8 Security Code Algorithm

9 Application and Vendor Integration

10 Attachments

Oracle Schema

Use the ETSIS schema. Customized area for Foothill-De Anza applications. No baseline Banner business logic, or related package modifications are allowed to be stored in the ETSIS schema.

Table Diagram

GXBCARD - Base Cardholder Table

Column Name	Type	Notes
GXBCARD_ID	VARCHAR2(32)	**Primary Key.** Randomly generated 32-character card identifier for internal ETS use only
GXBCARD_CWID	VARCHAR2(12)	**Primary Key.** Cardholder CWID
GXBCARD_SECR_CODE	VARCHAR2(4)	**Primary Key.** Four-character security code to uniquely identify the card. Randomly generated for new cards. Uniquely identifies a specific card issued to a cardholder
GXBCARD_CTYP_CODE	VARCHAR2(4)	**Primary Key.** Four-character type code to identify the nature and purpose of the card. See GXVCTYP for how card types are defined. Card type defines the associated college
GXBCARD_PIDM	NUMBER(12)	Cardholder PIDM (internal Banner person identifier)
GXBCARD_CARDHOLDER_NAME	VARCHAR2(128)	Cardholder name to be printed on the card. Preferred first name (if available) or legal first name + Legal last name
GXBCARD_ISSUE_DATE	DATE	Date card record was created (and assumed printed in the card office)
GXBCARD_EXPIRE_DATE	DATE	Card expiration date. See GXVCTYP for allow different expiration periods for different card types
GXBCARD_ACTIVE	NUMBER(1, 0)	Number to indicate whether or not a card is active and usable. 1 for card is active, 0 for card is not active. Lost or stolen cards should be disabled ASAP by setting to 0 (or unchecked). IDWorks only supports mapping a checkbox widget to a numeric field, but not the "Y/N" character convention used by Banner
GXBCARD_CLIPPER_IDEN	VARCHAR2(60)	MTA Clipper Card identifier (optional)
GXBCARD_MAGSTRIPE_TRACK1	VARCHAR2(1024)	Raw character data to be encoded on track 1 of the magnetic stripe
GXBCARD_MAGSTRIPE_TRACK2	VARCHAR2(1024)	Raw character data to be encoded on track 2 of the magnetic stripe
GXBCARD_MAGSTRIPE_TRACK3	VARCHAR2(1024)	Raw character data to be encoded on track 3 of the magnetic stripe
GXBCARD_BARCODE	VARCHAR2(1024)	Raw barcode data to be encoded/printed on the card
GXBCARD_PICTURE	BLOB (binary)	BLOB column for a cardholder picture. Uses Oracle Securefile technology for storage.
GXBCARD_IDWORKS_USER	VARCHAR2(30)	Username of the IDWorks who created or last updated the card record

Column Name	Type	Notes
GXBCARD_ACTIVITY_DATE	DATE	Date/time that the card record was created or last updated

GXVCTYP - Card Type Validation Table

Column Name	Type	Notes
GXVCTYP_CODE	VARCHAR2(4)	**Primary Key.** Short card type code
GXVCTYP_DESC	VARCHAR2(256)	Formal description for the purpose/intent of the card type
GXVCTYP_FEAT_MAGSTRIPE	NUMBER(1, 0)	Numeric indicator (1 = yes, 0 = no) of whether or not the card has an encoded magnetic stripe
GXVCTYP_FEAT_BARCODE	NUMBER(1, 0)	Numeric indicator (1 = yes, 0 = no) of whether or not the card is printed with a barcode
GXVCTYP_EXPIRE_INTERVAL	NUMBER	The number of days starting from date of issuance that this card type should be considered expired
GXVCTYP_ACTIVITY_DATE	DATE	Date/time that the card type was created or last updated

GXRCSWP - Card Swipe Log

The card swipe log is a collector for data about how a student or employee ID card (if so encoded with a magstripe or barcode) is being used around the campus. This table will allow us to collect date, time, and the application through which a card was presented. Applications that authorize an ID through the vendor API will keep swipe logs for later analysis.

Column Name	Type	Notes
GXRCSWP_CARD_ID	VARCHAR2(32)	**Primary Key.** Randomly generated 32-character card identifier for internal ETS use only
GXRCSWP_SWIPE_DATE	TIMESTAMP	**Primary Key.** Date/time card was swiped, scanned, or otherwise used to authorize an application or service
GXRCSWP_APPLICATION	VARCHAR2(128)	Name of the application or service that accepted the swipe

GXRCMET - Card Metadata

Card metadata is an extension point built into the schema to allow for the creation of new uses/applications for student and employee ID cards, but without the risk of needing to modify critical cardholder base tables.

Column Name	Type	Notes
GXRCMET_CARD_ID	VARCHAR2(32)	**Primary Key.** Randomly generated 32-character <u>card identifier</u> for internal ETS use only
GXRCMET_KEY	VARCHAR2(64)	**Primary Key.** Metadata key
GXRCMET_VALUE	SYS.ANYDATA	Metadata value stored as a flexible heterogeneous "anydata" value, i.e. the value can be many kinds of data
GXRCMET_ACTIVITY_DATE	DATE	Date/time that the metadata value was created or last updated

Internal Card Identifier Algorithm

Generated via the Oracle SYS_GUID() function.

Security Code Algorithm

Upon card creation, a random decimal number between 1 and 9999 is calculated, rounded to a whole integer, and is padded on the left with zeroes as needed until reaching a length of 4.

Application and Vendor Integration

Both internal applications (ex: Student Dashboard) and external applications (ePrintIt!) should authenticate card swipes directly with the Banner database through an API named GXACARD. Vendors must integrate using one of the following three possible protocols for authorizing a card swipe:

1. ODBC for Windows / .NET applications
2. JDBC for Java applications (cross-platform or web)
3. RESTful web services (optional for vendors who cannot directly integrate with Banner)

The GXACARD API should provide a stored procedure that accepts a swipe from an ID card, checks the CWID and card security code for validity, and authorizes the user to enter the application. Card validity checks includes ensuring that a card has not been flagged as lost/stolen or expired. **Applications that accept ID cards are required to *always* authorize a card swipe through the GXACARD API**, and should <u>**never**</u> directly query the base cardholder tables.