

Improving Data Upload Efficiency - An Internal Error Reporting Model



MCCB Data Conference
Dr. Adam Swanson | Dr. Jana Rocker
Monday, June 4th

Why Make An Investment Into an Internal Error Reporting Model?

Reason #1

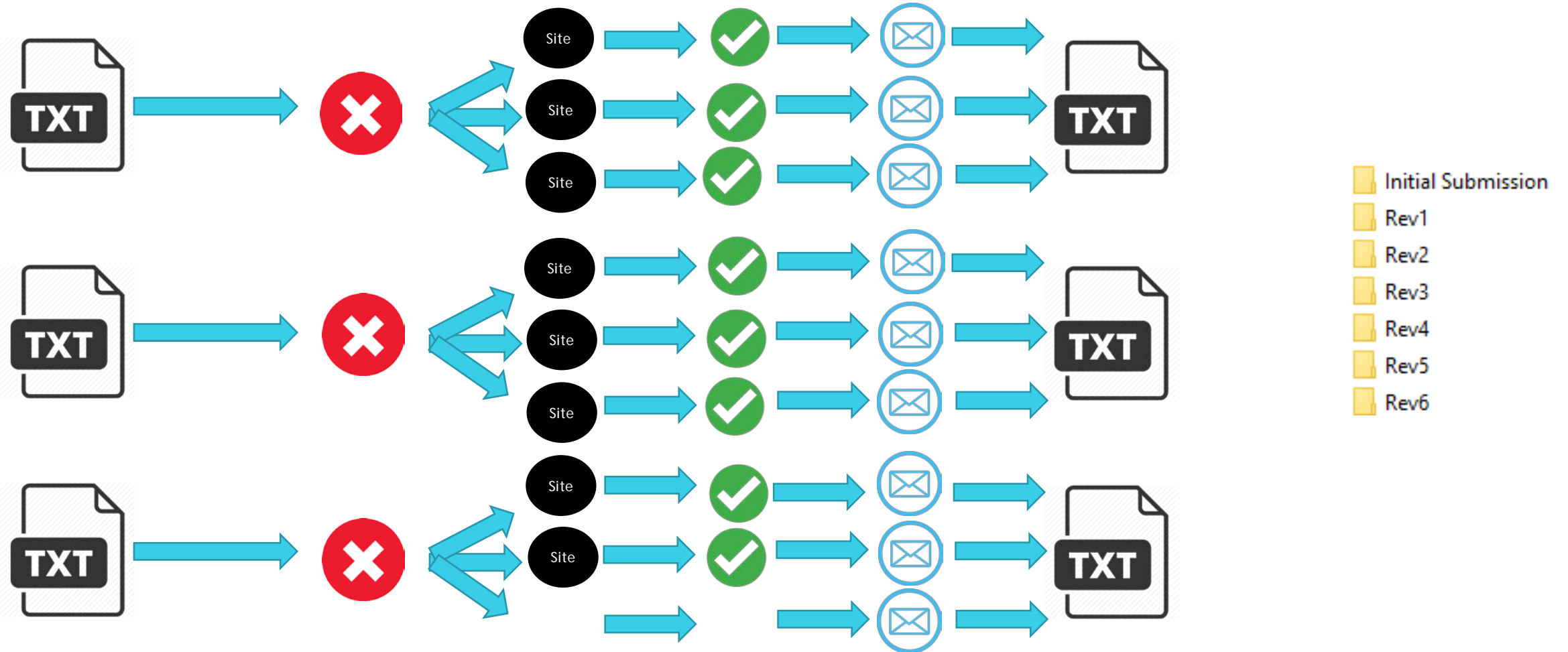
It was taking too long to upload files.

Reduce TB Estimates & Promote Efficiency



Improving Data Upload Efficiency - An Internal Error Reporting Model

Historical Model - 'Let Us Wait Until After the Term Ends to Identify/Work Data Issues'



Why Make An Investment Into an Internal Error Reporting Model?

Reason #2

To address data issues at the source during the term.

DATA ACCURACY



Results of the Project

~Took Process Down From 2-3 Months → ~15 minutes to upload the first three files

COURSE FILE = 1,874 Records

FACULTY FILE = 425 Records

PRIMARY ENROLLMENT = 8,903 Records

SCHEDULE FILE = 34,858 Records

46,060 Records

Streamlined Upload Process | Cleaned Up Institutional Data During the Term

General Steps to Replicate Model



STEP #1 - Identification of Primary Stakeholders in this Process



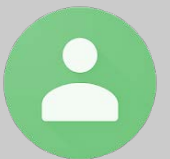
E-Learning

- MSVCC Verification
- Primary Point of Contact w/ VCC Data



Admissions

- Primary Point of Contact w/ Student Data - PE File, Graduate File
- Maintains Student Records



Teaching & Learning

- Primary Point of Contact for Instructional Data - Course File, Faculty File, Schedule File, Taking Attendance in the Classroom / Attendance Roster



Institutional Research

Data Stewardship | Responsible for the accuracy of data and reporting aspects

Step #2 - Understanding of Recurring Issues in Data

Never delete a validation error table or secondary verification file. These reports tell you where the **opportunity** lies.



49.0205	21104	Truck and Bus Driver/Commercial Vehicle Operator and Instructor.	7/7/2006	CC	No	Active
49.0205	21105	Truck and Bus Driver/Commercial Vehicle Operator and Instructor.	7/7/2006	CC	No	Active
49.0205	21109	Truck and Bus Driver/Commercial Vehicle Operator and Instructor.	7/7/2006	CC	No	Active
49.0205	21103	Truck and Bus Driver/Commercial Vehicle Operator and Instructor.	7/7/2006	CC	No	Active
49.0205	21101	Truck and Bus Driver/Commercial Vehicle Operator and Instructor.	7/7/2006	CC	No	Active
49.0205	21106	Truck and Bus Driver/Commercial Vehicle Operator and Instructor.	7/7/2006	CC	No	Active

In Blank Excel Doc. Add Five Tabs - Faculty, Course, Primary Enrollment, Schedule, Graduate. As You Encounter Errors, Add the Errors to the Respective Tab

Pivot the Data To Understand Frequency of Errors

PIVOT OUTPUT = ERROR REPORTING BLUEPRINT

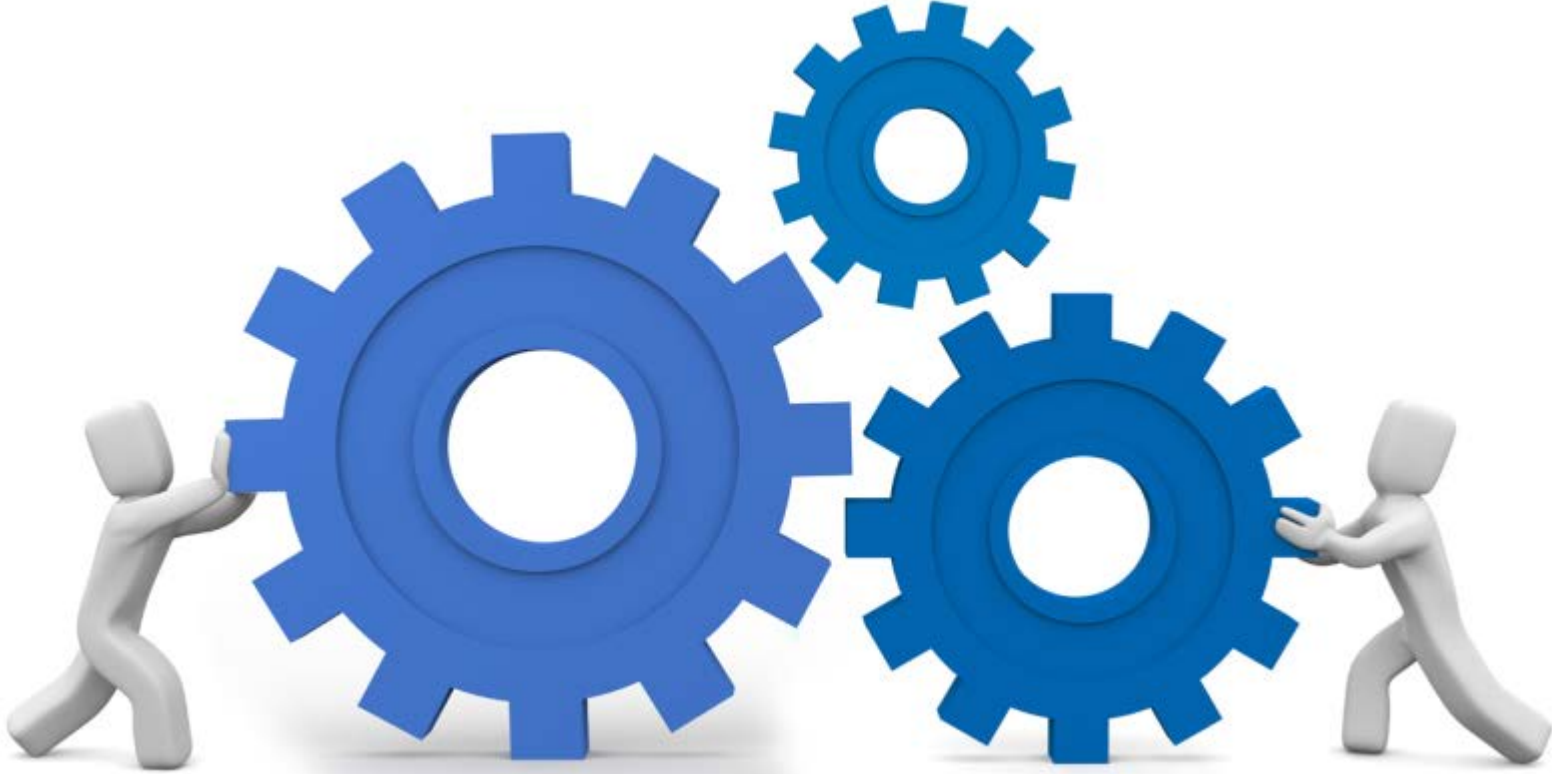
After you pivot the data you will see commonly recurring issue. The basic model here is to create error reports to address internal data issues.

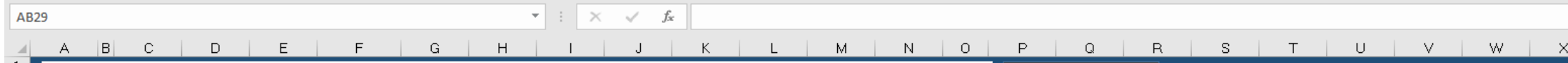
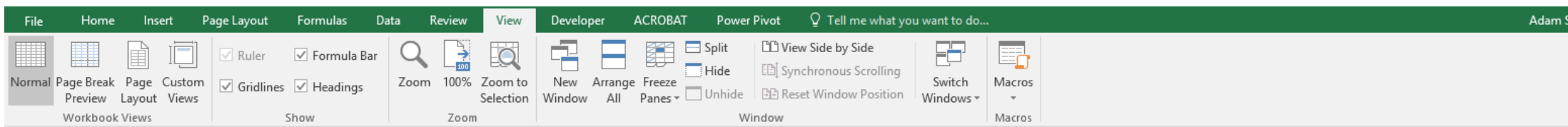
Step #3 - Thinking through the logistics

Questions you will need to ask yourself when you get to step #3...

- ✓ Do I want the reports live or snapshotted? There are pro's and con's to each approach
- ✓ What is the best format to present the data errors to the end user (e.g. Argos, Excel, Visual Analytic Tool, E-mail Communication)
- ✓ Who is responsible for making sure the reports are worked throughout the term and following up?
- ✓ What is the deadline for cleaning up data in the system?

Step #4 - Design, Testing & Implementation





MGCCC State Upload Data Faculty, Course, Student Schedule File Cleanup | Workbook 1 of 2

C, F, SS File Error Workbook
1 of 5

Friendly Shortcut #1

Press "Control + Page Up" to move tabs from right to left in the workbook.

Press "Control + Page Down" to move tabs from left to right in the workbook.

Friendly Shortcut #2

To delete all records in this workbook and replace with updated information, click "Control + Shift + D" This will delete all records.

Then click on 'Data' tab in the ribbon above and click 'Refresh All'

All the error reports that sit behind this workbook will run at 4:00 a.m. each morning.

**FACULTY
FILE ERRORS**

**COURSE
ERRORS**

PE ERRORS

**SCHEDULE
FILE ERRORS**

**GRADUATE
FILE ERRORS**

Priority - 10 Day Reports		
A1	Faculty File Error Report - Missing Information, Missing Discipline, Discipline Does Not Match Code	Click Here
A2	Faculty File Error Report - Faculty Member Named as "Staff"	Click Here
A2	Course File Error Report - Missing Meeting Dates, Missing Start Date, Missing End Date, Missing Course Number	Click Here
A3	Course File Error Report - Course Not Approved by State, Mismatch in Credit Hours	Click Here
A4	Student Schedule File Errors	Click Here
A5	Excessive Absences	Click Here
A6	Mismatch of Reg Code and Grade	Click Here
A7	Attendance Rosters - Missing Signatures Report	Click Here



MISSISSIPPI
COMMUNITY COLLEGE BOARD

File Home Insert Page Layout Formulas Data Review View Developer ACROBAT PowerPivot Tell me what you want to do... Adam Swar

Cut Copy Paste Format Painter Clipboard Font Alignment Number Styles Cells Editing

MS Sans Serif 10 A A Wrap Text General Currency 2 Normal 2 Normal 2 3 Normal 6 Note 2

B I U Merge & Center Conditional Formatting Format as Table Normal Bad Good Neutral Calculation

AutoSum Fill Clear Sort & Find & Filter Select

A27

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z AA AB AC



PE File Error Workbook 3 of 5

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Friendly Shortcut #2

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Then click on 'Data' tab in the ribbon above and click 'Refresh All'

All the error reports that sit behind this workbook will run at 4:00 a.m. each morning.

Priority - 10 Day Reports		
A1	Multiple Application Processed for One Term	Click Here
A2	Multiple HS Records in SOAHSCH	Click Here
A3	Invalid or Missing Dates of Birth and Graduation Dates	Click Here
A4	Disagreements Between Student Types & HS Graduation Dates (e.g. DE Student That Already Graduate HS)	Click Here
A5	99 County Code Errors	Click Here
FTFY & DE Cohort Clean-Up		
B1	First-Time First-Year Members w/ Prior Academic History - NSC Tracker Report	Click Here
B2	FTFY Coding in Banner - Discrepancies Between SWE Logic and Student Type in Banner	Click Here
B3	DE Coding in Banner - Discrepancies Between SWE Logic and Student Type in Banner	Click Here
Validations		
C1	District Error Codes	Click Here
C2		



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FACULTY FILE ERRORS

COURSE ERRORS

PE ERRORS

SCHEDULE FILE ERRORS

GRADUATE FILE ERRORS

Taking a Dive Into Sample Reports.... PE FILE ERRORS

High School Grad date and Date of Birth Errors

- Sample Error 1: Age 0 when graduated from high school?? Please check DOB and HS grad date. Based on logic that DOB = HS Grad Date.

Report pulls:	Example Student	Likely issues:
DOB	06/07/2000	DOB was entered as HS Graduation Date of Vice Versa. Action: Correct HS Graduation Date or DOB
HS Graduation Date	06/07/2000	
Age of Graduate	0	
Years Since Gradation	18	
Age at First Day of Term	18	

Taking a Dive Into Sample Reports.... PE FILE ERRORS

High School Grad date and Date of Birth Errors

- Sample Error 2: Student is Dual Enrolled, Early College Program, or a Home School/High School Graduate and we have no hs graduation date on file
- Based on logic compliance = 6, 1 and HS grad date is null.

Report pulls:	Example Student	Likely issues:
DOB	08/09/2000	Admitted on a HS Transcript. Missing high school graduation date.
HS Graduation Date	NULL	
Age of Graduate		
Years Since Gradation		
Age at First Day of Term		

Taking a Dive Into Sample Reports.... PE FILE ERRORS

99 County Code Errors

- Sample Errors :Address in United States but no state /County defined
- Based on logic country = US and state code and/or county code = 99

Report Pulls:	Example:	Likely Issues:
County Code	NULL	Missing county code in address

Taking a Dive Into Sample Reports.... PE FILE ERRORS

District Code Errors

- Sample Errors : Student campus not approved for their major
- Based on logic : Compare student campus to approved campus for their major
- Download the "Master CT Programs" table from EARS "Tables and Views"

eARS RELEASE 2.1

Rocker, Jana - College Audit Adm.
Mississippi Gulf Coast Community College

Wednesday, May 30, 2018
[Sign Off](#)

Msvcc Cut-off-Date: **2/18/2018** Select Term **Spring 2018**

MGCCC eAudit Summary Pre-Audit (MSVCC) File Upload & Validation **Tables & Views** Security

Search by CIP Code: [GO](#)

Master CT Programs

Filter by: CIP Status:

Records: 1309 of 1309

Cip	Campus	Major	Approval	Award	MiBEST	Status
01.0102	20501	Agribusiness/Agricultural Business Operations.	02/01/1975	AAS	No	Active
01.0102	20501	Agribusiness/Agricultural Business Operations.	02/01/1975	TC	No	Active
01.0102	20701	Agribusiness/Agricultural Business Operations.	02/07/1974	AAS	No	Active
01.0102	21301	Agribusiness/Agricultural Business Operations.	06/01/1966	AAS	No	Active
01.0102	21301	Agribusiness/Agricultural Business Operations.	03/17/2017	TC	No	Active
01.0102	21301	Agribusiness/Agricultural Business Operations.	03/17/2017	CC	No	Active

We loaded the file into a custom table in our database which allows us to query it to compare the Student campus in Banner with the approved campuses.

Taking a Dive Into Sample Reports.... PE FILE ERRORS

District Code Errors Continued....

- Based on logic : Compare student campus to approved campus for their major

Report pulls:	Example Student	Likely issues:
Hegis Code / Major Code	7501	The mismatch is with the site code. Check major or campus assigned to curriculum
CIP	56.6787	
Program Description	Basket Weaving	
Campus Code	21105	
EARS Approved Campus	21106	

Taking a Dive Into Sample Reports.... PE FILE ERRORS

Invalid MS High School ACT Code


- Sample Errors :MS High School that does not have an approved ACT code
- Based on logic : Compare student MS high school code to EARS approved HS Table
- Download the “Mississippi High School ACT Codes” from EARS “Tables and Views”
- The invalid code is either 1) a typo and needs to be corrected 2) a new school that needs to be added to the state approved list.

Table Views

- MCCB Master Academic Programs
- MCCB Master Career & Technical Programs
- MGCCC Approved Career & Technical Programs
- MGCCC Sites
- Mississippi High School ACT Codes
- Course Numbering Reference Table

- We loaded the file into a custom table in our database which allows us to query it to compare the High school code in Banner with the approved codes
- If the code is NOT in the approved list, it triggers the error and appears on the report.

Requesting a MS ACT Code that is **not** already accounted for the in the reference table...

**MGCCC**
Mississippi Gulf Coast Community College

Request to Add a MS ACT Code to the MCCB ACT Code Reference Table
Complete this form if we need a new MS ACT code to the state reference table. Please make sure the school isn't already on the master list before you complete this form.

Name

First Last

Email

Name of High School

ACT Code in Banner

Address of High School

Street Address



Upon Submission - Automatically sends the request form via e-mail to IR. The request is then forwarded to MCCB.

Taking a Dive Into Sample Reports.... COURSE FILE ERRORS

Course File Subject Number Check

Sample Error : Course Subject Number and hours do not match EARS Approved Courses

Based on logic : Compare subject and course # to approved list

Download the "Course Numbering Reference Table" from EARS "Tables and Views"

Table Views

- MCCB Master Academic Programs
- MCCB Master Career & Technical Programs
- MGCCC Approved Career & Technical Programs
- MGCCC Sites
- Mississippi High School ACT Codes
- Course Numbering Reference Table

- We loaded the file into a custom table in our database which allows us to query it to compare the course subject and number in Banner with the approved codes
- If the code is NOT in the approved list, it triggers the error and appears on the report.

Taking a Dive Into Sample Reports.... COURSE FILE ERRORS

Missing Course Meet Dates

Sample Errors : No Start Date, No End Date, No meet days defined

- Based on logic : Checks SSASECT in Banner (Class Data) and looks for missing start date, end date, and weekdays it meets.
- Without this data, # of class meets and census date cannot be determined accurately.

Schedule SSASECT 8.9.2 (*PROD*)

Term: 201820 CRN: 25268 Create CRN: Copy CRN: Subject: ELT Course: 1563 Title: Low Voltage/Special Systems

Course Section Information Section Enrollment Information Meeting Times and Instructor Section Preferences

Times and Instructors Scheduler Preferences

Meeting Times

Meeting Dates Meeting Location and Credits

Meeting Time	Meeting Type	Start Date	End Date	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Start Time	End Time	Session Indicator
<input type="checkbox"/>	CLAS	29-MAY-2018	03-AUG-2018	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0800	1600	01
<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

Checking for missing information

Taking a Dive Into Sample Reports....FACULTY FILE ERRORS

Missing Faculty Discipline Code

Sample Errors : Missing Faculty Discipline Code

- Based on logic : If there is no Faculty category in Banner, trigger error

If there is no discipline code or an invalid discipline code, it will cause an upload error in the faculty file!

Taking a Dive Into Sample Reports....Summary

- ✓ There are many more error reports we use to clean up data during the term - this is a sample
- ✓ Allows faster uploads at end of term because most verifications/validations are predictable and fixable as early as right after registration
- ✓ Use the EARS reference tables.

Questions?

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