District-Level Data Integrity:

How do I know it's there?
How do I approach improving it?

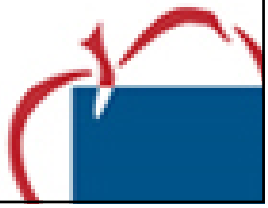
Jessica Tickle, AACPS

Gary Mills, AACPS



District-Level Data Integrity

- Hint: The answers are:
  - –purposeful transparency,
  - –a defined pivot point, and
  - –diligent security.
- This is one district's experience answering these two questions and taking steps to increase the integrity of all student-level reportable data.



ANNE ARUNDEL COUNTY PUBLIC SCHOOLS

ELEVATING ALL STUDENTS ... ELIMINATING ALL GAPS

- 79,000+ students
- 126 schools
- 5,660+ teachers
- Magnets, Signatures, Charters

Magnets

A magnet program offers specialized courses of study or an emphasis on instruction that is different from the traditional curriculum offered in Anne Arundel County Public Schools. Magnet programs attract qualified students from a designated geographic area who complete an admission process.

International Baccalaureate (IB) Middle Years and Diploma Programmes for students in grades 6 through 12 at Annapolis Middle — Annapolis High, Old Mill Middle North — Old Mill High, MacArthur Middle — Meade High

Science, Technology, Engineering and Mathematics (STEM) magnet programs at North County and South River high schools, and Old Mill Middle School South

BioMedical Allied Health magnet program at Glen Burnie High School

Performing and Visual Arts magnet programs at Bates and Brooklyn Park middle schools, and Annapolis and Broadneck high schools

Award-winning **Centers of Applied Technology** in Edgewater and Severn

Instructional Data Division

- Mission – Collect, Analyze, and Apply Instructional Data with Integrity. The Why!

AACPS Instructional Data Division

Collect, Analyze, and Apply Instructional Data with Integrity

- The Office of Student Data is the 'collect' portion AND the 'integrity' portion. The Who!

Office of Student Data

- 2 Assistant Principals
- 1 Counselor
- 3 Teachers
- 1 Registrar
- 1 School Secretary
- 1 Computer Tech
- 1 Program Manager
- A whole lot of gumption and creativity

Perspective!

Instructional Data Division
Student Data
AACPS

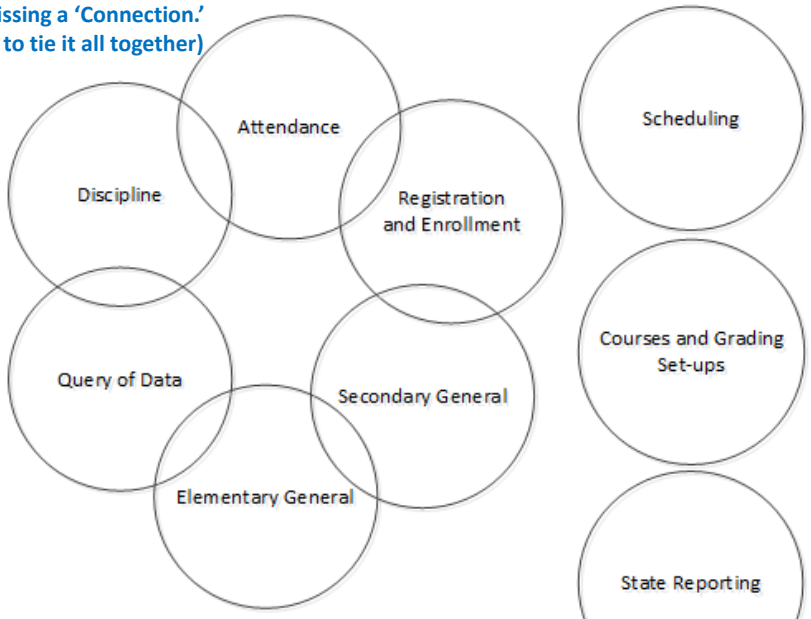
What is Data Integrity?

Let's figure out what it is…

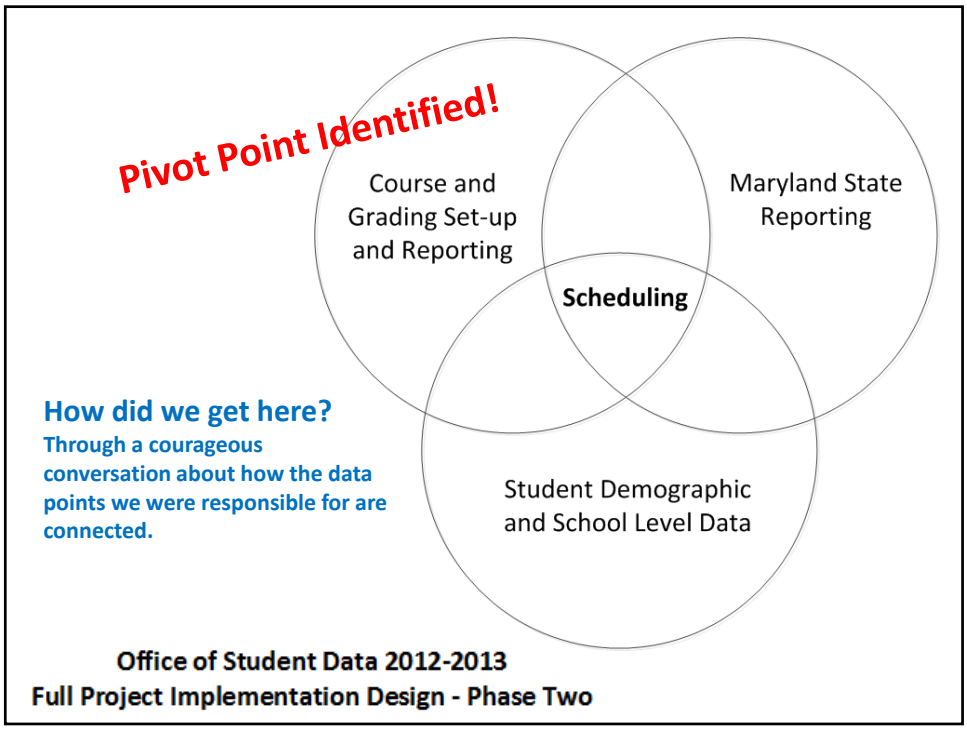
- **Phil** – continuing validity of data at any given moment in time, over a period of time.
- **Diane** – only as good as the people providing the initial data.
- **Kerri** – accuracy and consistency of stored data, a critical component to state reporting.
- **Roos** – ensuring secured quality data, prepare for accurate data entry across the board
- **Jackie** – the validity of data, meaning data is consistent and correct. Good data in… in good data out!! Bad data in… in bad data out!!
- **Tom** – consistent from county to state to national, apples to apples when compared.
- **Mark** – the reliability of data elements during their entire life cycle.
- **Ed** – to maintain and protect the consistency of the data.
- **John** –the notion that information has been gathered and disseminated in such a fashion that the information is thorough and up to date.

If data is correctly entered and disseminated, then and only then will the information achieve data integrity.

We were missing a 'Connection.'
(Something to tie it all together)



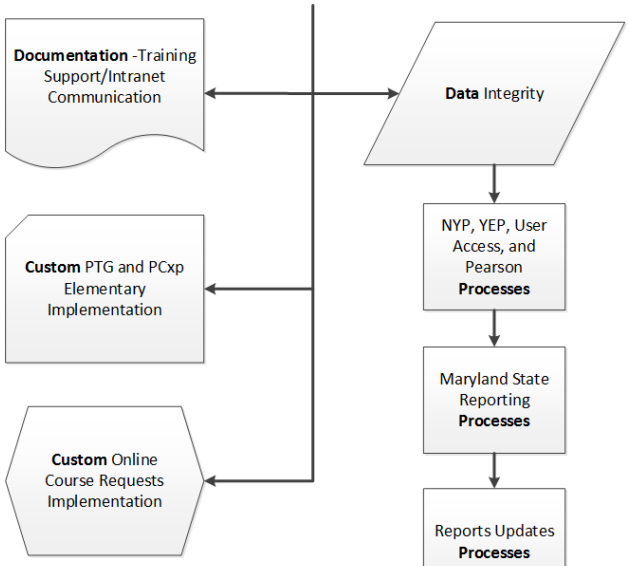
Office of Student Data 2011-2012
Successful Project Launch Design - Phase One



How did we get here?
Through a courageous conversation about how the data points we were responsible for are connected.

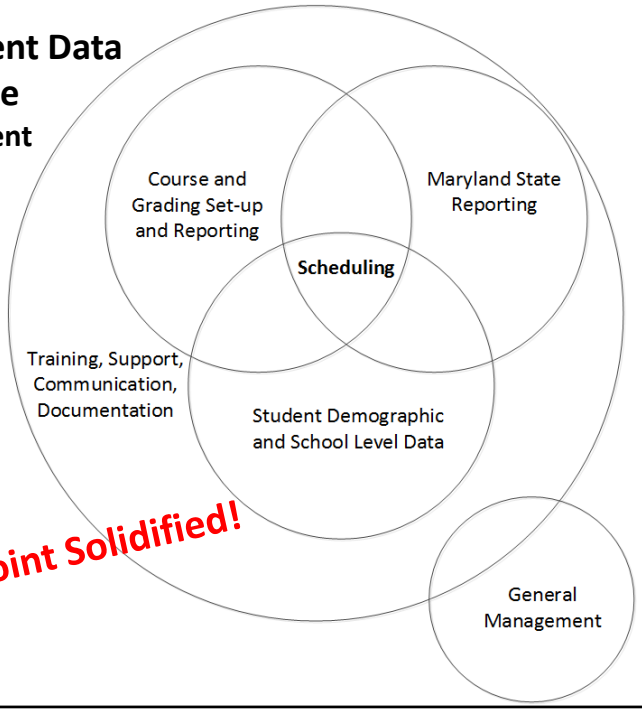
Office of Student Data 2012-2013
Full Project Implementation Design - Phase Two

Office of Student Data Initiatives



Focused initiatives grew our data integrity.

Office of Student Data Structure
2013-Present



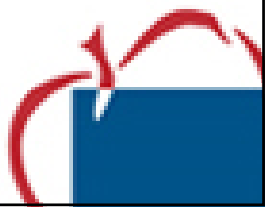
Pivot Point Solidified!

Transparency – Conversations Started

Making Course Data Connections in PowerSchool SMS

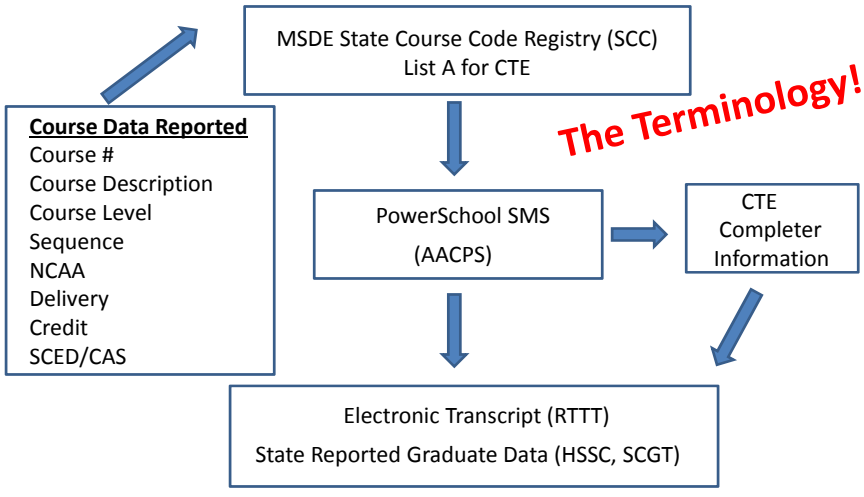
High School and Middle School Courses

(and Elementary too!)



Data Connections

Ensuring Valid Alignment –
Course Scheduling through State Reporting

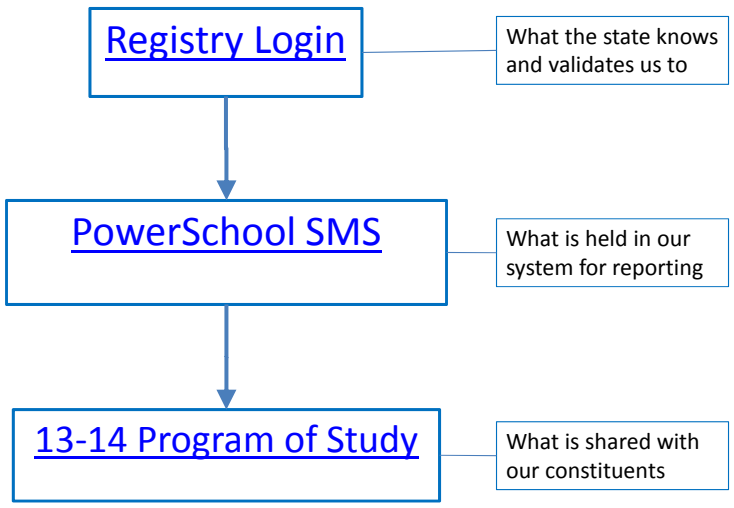


Goals

- Single Source of Data (the truth)
- Many Points of Access (all can see)
- Efficiency (way to edit)
- Clarity (who is responsible for what)
- Consistent Communication (to users)
- Leverage technology (to verify and advance)

The Explanation and Buy-in!

Connections

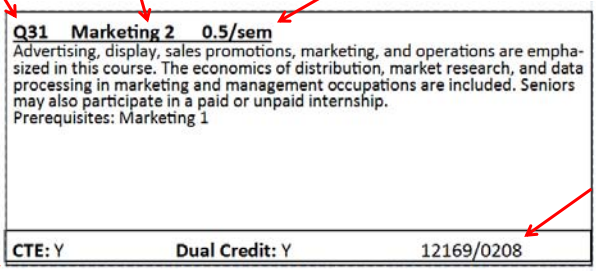


Course Descriptions

The first letter and 2 (or 3) digits of the course number

Course Title in SMS

Potential Credit- No space between the number and "sem" means it is a one semester course ONLY. The "/" means it can be taken more than one semester.



State Subject Code

Meets the requirements of a CTE Program OR NCAA Eligibility

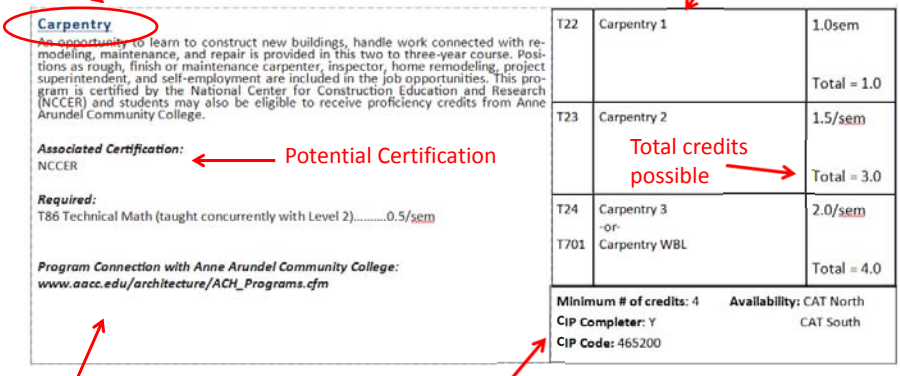
Approved for dual credit shows a "Y". If blank, the course is not approved.

SCED Code

CTE Completer Programs

Name of the Program

Approved Courses



Potential Certification

Total credits possible

Link to available Post- secondary programs

Critical information about the program:
***Please note that programs have specific availability. This is based on approval from MSDE. ***

Course Descriptions

Possible Credits and Class Length

0.5sem— A one semester class. A student can earn a maximum of 0.5 credit.

0.5/sem—A class that can be taken for more than one semester. A student can earn 0.5 credit for each semester that the course is taken.

Course ID# | **Title of Course** 0.5sem

Course Description — The course description is an overview of the content of the course and may contain additional information, such as student expectations, class assignments, and details about exams and certifications.

Prerequisites: *Requirements needed before a student can take this class.*

CTE NCAA DUAL 12345/1234

SCED Code/State Subject Code
(for internal use)

This course meets the requirements of specific programs:

CTE —***Career and Technology Eduction Program***

NCAA —***National Collegiate Athletic Association*** *(see page 14)*

DUAL —***Anne Arundel Community College Dual Enrollment*** *(see page 9)*

D297 | **Honors Algebra 2** 0.5/sem

This course will expand students' knowledge of functions to include polynomial, rational and radical functions. Students will work with expanding features of the functions and draw connections with the experiences of linear, quadratic, and exponential functions. Students will model situations to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. Students will build on their experiences to work with trigonometric ratios and functions. This course also has a focus on data and probability distributions . Honors students will be introduced to advanced topics. Graphing calculator is required. Students will actively engage in hands-on project based learning experiences throughout the course.

Recommended: *Algebra 1 (C or better) and Geometry credit or concurrent enrollment in Geometry.*

NCAA 02056/1200

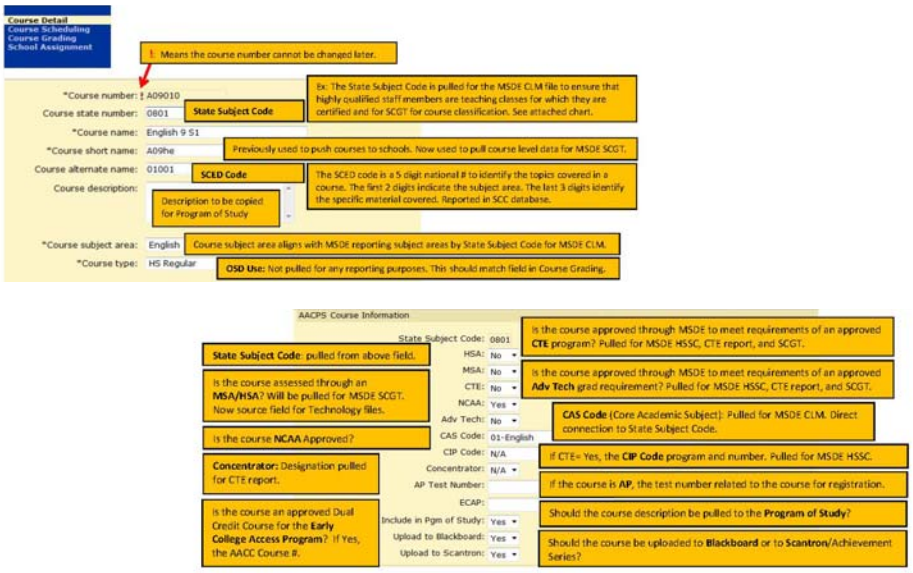
CIP 511150 | **Biomedical Sciences: Project Lead the Way** Minimum Credits: 4

The goal of the program is to increase the number of students pursuing careers in the biomedical sciences, including healthcare. Students who complete the program are prepared for employment and further education at two- and four- year college levels. Stevenson University, the Maryland PLTW Biomedical Sciences Affiliate University, will offer four (4) transcripted credits for its first semester majors biology course (BIO 113). The credit will be offered for those students who complete the entire PLTW biomed sequence of courses and score at least 80% on each end-of-course assessment.

	Credits per Semester	Maximum Possible
M35 Honors Principles of Biomedical Sciences	0.5	1.0
M36 Honors Human Body Systems	0.5	1.0
M37 Honors Medical Interventions	0.5	1.0
M38 Biomedical Science Capstone	0.5	1.0

Availability: Glen Burnie

Course Meta-Data Dictionary

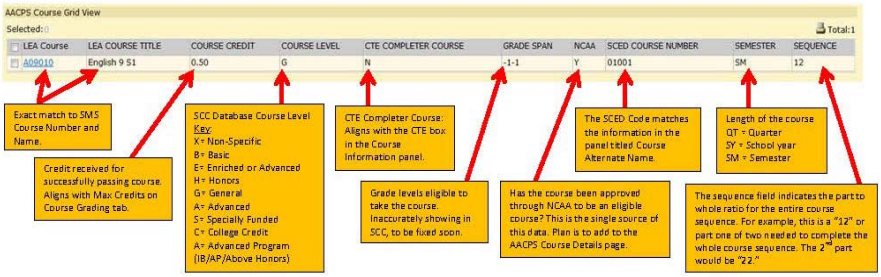


Core Academic Subjects

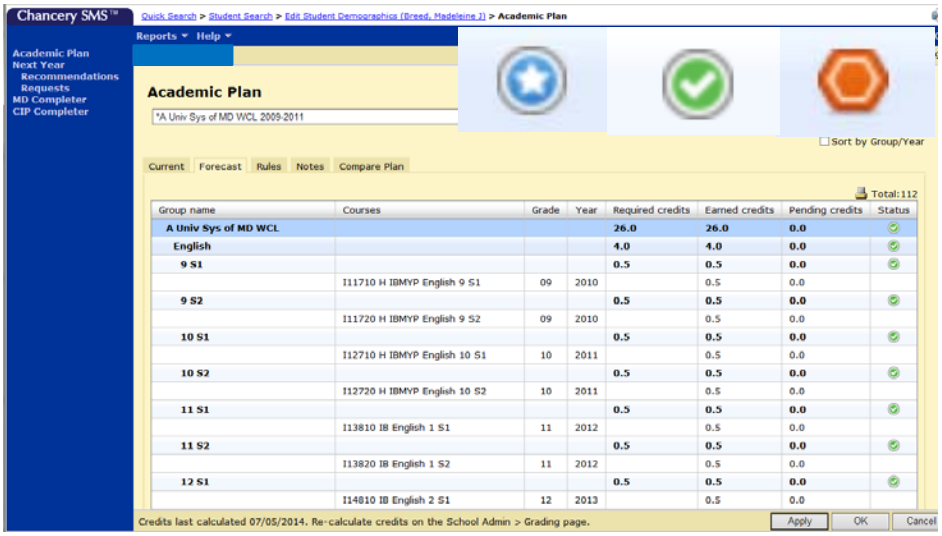
CAS	Core Academic Content Area	MSDE Subject Code	Subject
01	English	0801	English
		0900	ESOL
02	Language Arts/Reading	0803	Reading
03	Foreign Languages	1001	French
		1002	German
		1003	Latin
		1004	Russian
		1005	Spanish
		1006	Other
		1007	Multiple Language
		1008	Arabic
		1009	Chinese
		1010	Italian
		1011	Japanese
04	Mathematics	1200	Mathematics
05	Science	1601	Biology
		1602	Chemistry
		1603	Earth/Space
		1604	General Science
		1605	Geology
		1606	Physical Science
		1607	Physics
		1608	Environmental Science
12	Social Studies	1701	Economics
		1702	Geography
		1703	History
		1704	Political Science
		1706	Social Studies
08	The Arts	0100	Art
		0400	Dance
		0500	Drama/Theater
		1300	Music
11	Elementary Education and Early Childhood	0703	Elementary
		0702	Kindergarten

Course Meta-Data Dictionary

The course grid view is uploaded directly from the MSDE Standard Course Code (SCC) Database on a weekly basis (Wednesdays at 12pm) using an automated process. See LEA Course Upload directions for SPROC information and specifications.



Use of Academic Planner Functionality



Diligent Security

We have built this now how do we protect it?

1. Protection of data compliant to legal requirements
2. Unauthorized access controlled via permissions, documented trainings and audit logs
3. Training, training, and retraining
4. Checks and corrections for invalid data, Data Quality Assurance
5. Stability, centralized responsibility
6. Think and plan ahead

District-Level Data Integrity

- **Through purposeful transparency, a defined pivot point, and diligent security, we are closer than ever.**



- **Prepared for the impact of constant change throughout the life-cycle of our data collection and storage responsibilities.**

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