

NCCCS Data Dashboard Initiative:

Communicating Equity Through Data Visualizations

**SHEEO Community of Practice:
Improving Equity & Opportunity
Through Postsecondary Data**

September 28, 2022

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Research and Performance Management About Us

The primary mission of the Research and Performance Management (RPM) team is to inform sound policy and decision making by collecting, analyzing, and reporting data for the fifty-eight institutions of the North Carolina Community College System (NCCCS).

The team also supports data collection and reporting associated with the system's strategic initiatives, data sharing between state agencies, and national initiatives focused on improving student success.





Research and Performance Management Timeline

Before 2018

- Produced .pdf reports associated with state performance measures, Title II, Perkins, and equity-focused initiatives
- Produced State Performance Measures dashboards with SAS Visual Analytics

2018

- Responsibility for official system data reporting shifted to team
- Focused on strengthening methodology for standard reports (Enrollment, FTE, Graduation, Tuition Remission) and state and federal reporting

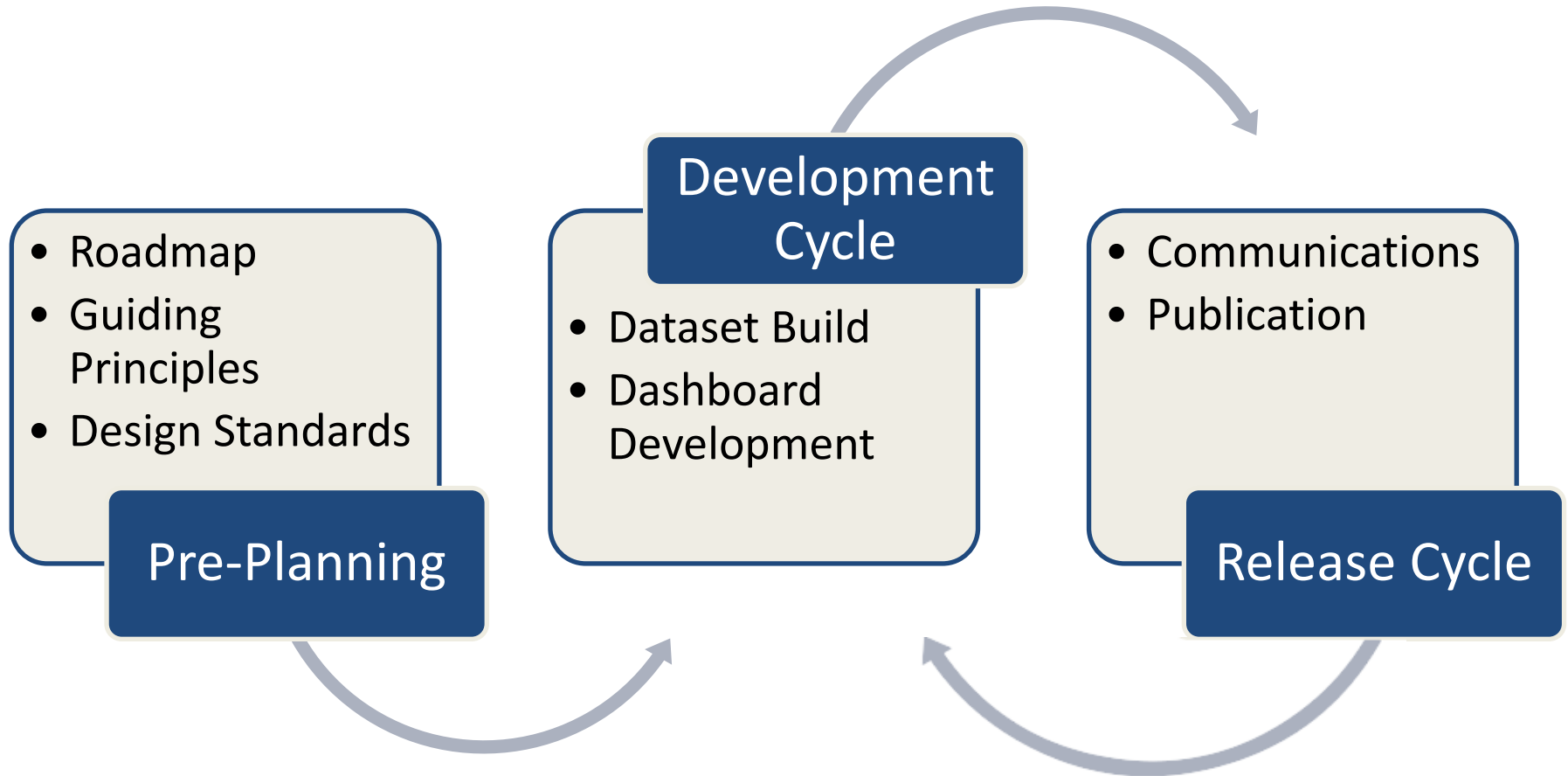
2019: Start of Dashboard Initiative

- Hired a Business Intelligence Analyst to focus solely on dashboards
- Released first public-facing dashboards using Tableau

2020 - 2022

- Approximately 1000 dashboards across 50 plus focus areas on the NCCCS website
- Launched Power BI to provide college access to record-level data behind a login

NCCCS Dashboard Initiative Process





NCCCS Dashboards

Pre-Planning: Roadmap

Access

- NC Public/Charter High School Student Dual Enrollment Rate
- High School Graduate Subsequent Enrollment Rate
- High School Equivalency (GED, HiSet, TASC)
- Graduate Subsequent Enrollment Rate
- Basic Skills Adult Enrollment Rate (18-64 year-olds without a high school diploma)
- CU/CE Adult Enrollment Rate (18-64 year old high school graduates without an associate's degree or higher)
- Market Share of NC Public College-Going Students
- Enrollment to Unemployment Ratio
- Application and Enrollment Yield Rates

Enrollment

- Total Enrollment (Headcount)
- Basic Skills Enrollment (Headcount)
- Workforce Continuing Education Enrollment (Headcount)
- Curriculum Enrollment (Headcount)
- Total FTE
- Basic Skills FTE
- Workforce Continuing Education FTE
- Curriculum FTE

Student Progress

- Basic Skills Retention & Participation
- Basic Skills Attendance Hours
- Basic Skills Assessment Practices
- Basic Skills Measurable Skill Gain Rate (PM1)
- Developmental Education Outcomes
- CE Course Outcomes
- CU Course Outcomes
- CU Credit Accumulation
- CU Student Success Rate in College-Level English (PM2)
- CU Student Success Rate in College-Level Math (PM3)
- CU Satisfactory Academic Progress (2.00 GPA and 66.7% course success)
- CU Student First-Year Progression/Persistence (PM4)
- CU Stop-Out Student Re-Entry

Student Success

- Curriculum Completion (PM5)
- Time to Completion
- Licensure and Certification Passing Rate (PM6)
- College Transfer Performance (PM7)
- UNC Transfer Outcomes
- Employment Rates
- Post-Enrollment Employment Outcomes

Programs and Instruction

- College Characteristics (IPEDS)
- Course Enrollments
- Distance Education and Online Learning
- Instruction by Faculty Type
- Instruction by Location
- Instruction in Correctional Facilities
- Facilities Utilization
- Program Enrollments
- Program Retention
- Credentials Awarded
- CTE Program Outcomes (Perkins)
- Career and College Promise Program
- Work-Based Learning and Apprenticeship
- Small Business Center
- Customized Training

Faculty/Staff

- Faculty/Staff Headcount & Demographics
- Faculty/Staff Retention
- Basic Skills Personnel by Function & Job Status (NRS)
- Full-Time CU Faculty Salaries (IPEDS)

Finance

- Financial Aid
- Institutional Revenue/Expenditures
- Tuition Remission Waivers

Labor Market

- NC Employment Trends
- NC Employment Outlook



- Publicly Available
- Ease-of-Use
- Consistent Methodology
- Data Validations
- Interactive
- Variety of Views to Provide Insight:
 - Point-in-Time
 - Longitudinal
 - Institutional
 - Comparisons to NCCCS, peers
 - Equity gaps
- Timely Data Updates
- Export Functionality (PDF, PPT, Data)
- Help Resources Available (Metric Details, User Guide)

- Created the RPM Dashboards Design Guide, which includes standards around:
 - Design process
 - Suppression/data masking
 - Dashboard design
 - Placement of icons, filters, titles, etc.
 - Sizing
 - Fonts
- Developed standard color palettes to use across all dashboards



NCCCS Dashboards Development Cycle

- RPM team decides which data and dashboards to prioritize, based on stakeholder input and data availability
- Application System Analysts build aggregated dashboard datasets
- Business Intelligence Analyst builds dashboards using standard NCCCS template
- Meet weekly as a team to share dashboard work, answer questions, and gather feedback
- Share near-complete versions with focus group to gather feedback around usability before release
- Share near-complete versions with stakeholders to gather feedback around data and functionality before release



NCCCS Dashboards Release Cycle

- Two-week preview period:
 - Dashboard is published on Tableau Public but not on RPM website
 - Email is sent to colleges alerting them of new dashboard and providing a link to the “preview” version on Tableau Public
 - Colleges can use this time to review dashboards and ask questions before official release
- At end of two-week preview period:
 - Dashboard is published on RPM website
 - RPM hosts a webinar providing training to college users on how to use the new dashboard, interpret the data, and leverage the results locally



NCCCS Dashboards Features

Total Instructional Activity

Overall By Acad. Level By Online By Tier By Location Distribution by Prefix Compare Colleges FTE Change Metric Details

Trends in Instructional FTE by Academic Level Over Time (Reporting Years)



College: Carteret CC

Filters in red font will carry through to the other tabs of the dashboard. Filters in black font apply to the current page only.

Select College:

Carteret CC

Select Comparison:

NCCCS

Select Timeframe:

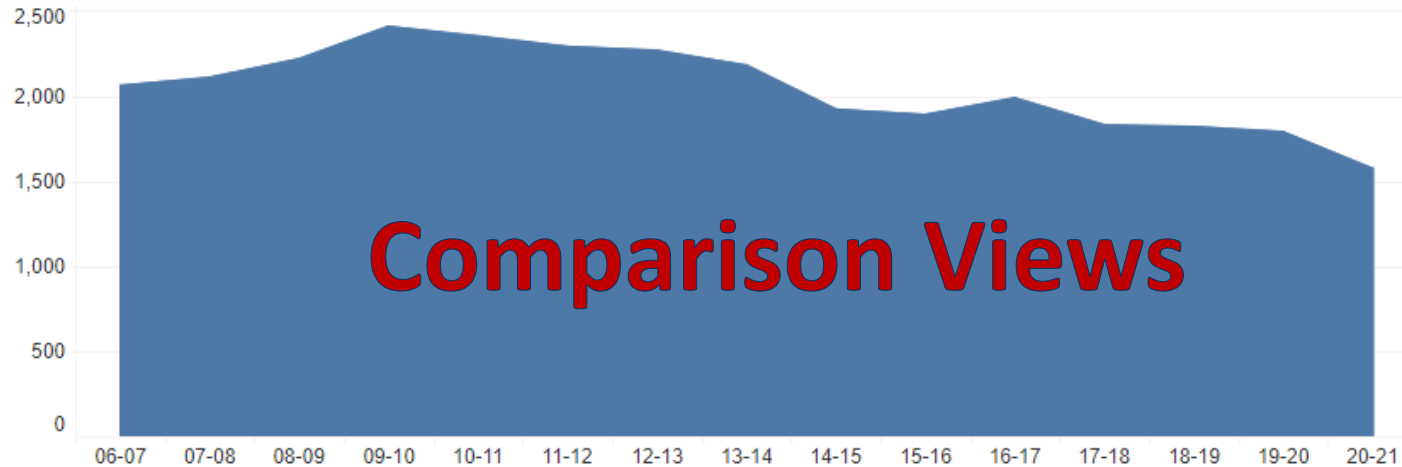
Reporting Years

Focus On:

All Academic Lev...

All Acad. Levels

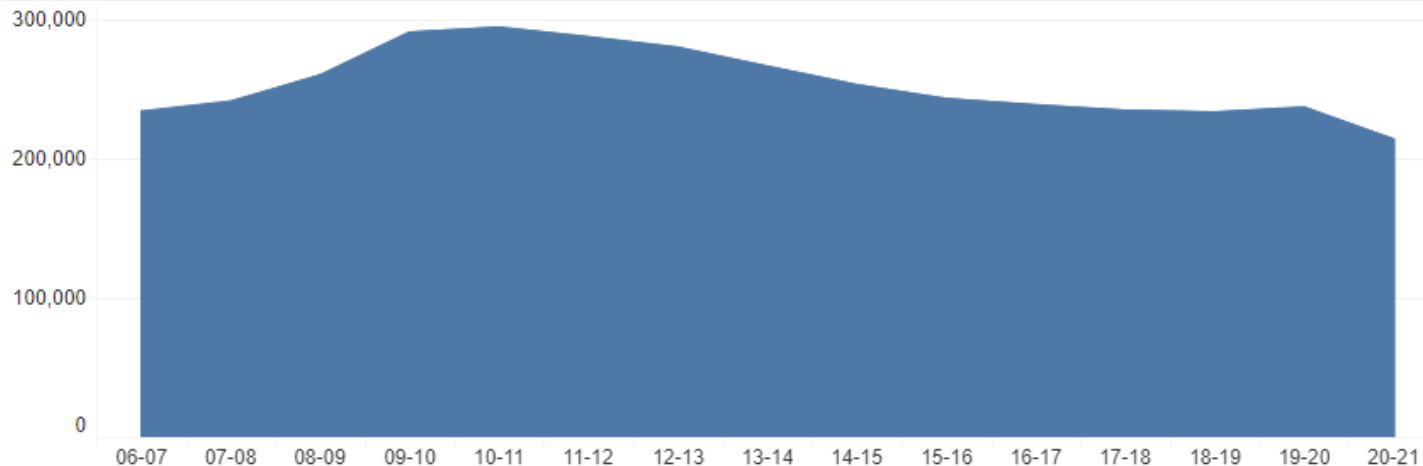
Comparison Views



College: NCCCS

[Click here for Curriculum Instructional FTE Dashboard](#)

[Click here for Continuing Education Instructional FTE Dashboard](#)



Note: Historical FTE converted to conform to current policy
FTE = Hours/512
SSS & ZZZ records excluded
Reporting Year = Summer, Fall, Spring
Source: ICR



- Sex
- Race/Ethnicity
- Sex and Race/Ethnicity
- Age Range
- Sex and Age Range
- Full-Time/Part-Time
- Dual Enrollment
- Pell
- Remediation
- Employment Status
- Zip Code
- County
- County Tier
- Prosperity Zone
- Program
- Instructional Method

Curriculum Headcount

Common Disaggregations

Overview Overview by Time Disaggregation by Characteristic Disaggregation by Institution Disaggregation by Program Disaggregation by Gender Disaggregation by Age Range Change Metric Details

Sex

Race/Ethnicity

Race/Ethnicity & Sex

Age Range

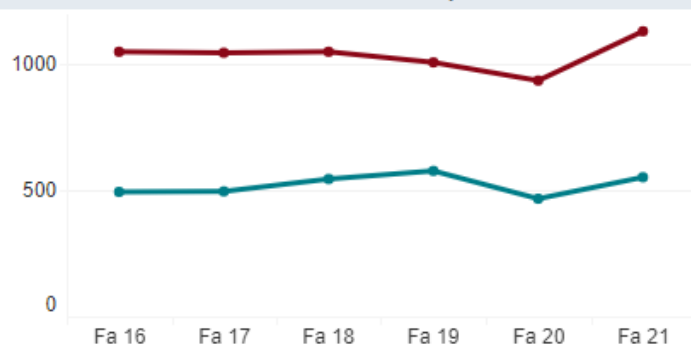
Sex & Age Range

Curriculum (CU) Enrollment by Sex - All Students

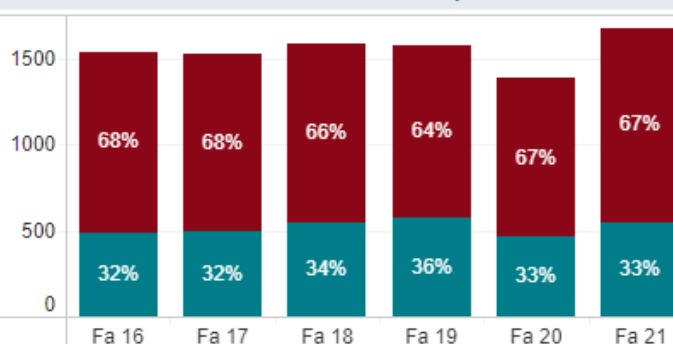
To change whether the dashboard displays data for all students, dually enrolled HS students, or not dually enrolled students, go to the "Overview" tab and change the filter selection.

College: **Carteret CC**, New/Returning Status: **All (New and Returning)**, Program Type: **All Programs**

CU enrollment over time by sex



CU enrollment distribution by sex



Changes to the filters below will affect this page only. To change filter selections for the entire dashboard, use the "Over Time" tab.

College
Carteret CC

Comparison
NCCCS

Timeframe
Fall Terms

New/Returning Status
All (New and Ret...)

Program Type
All Programs

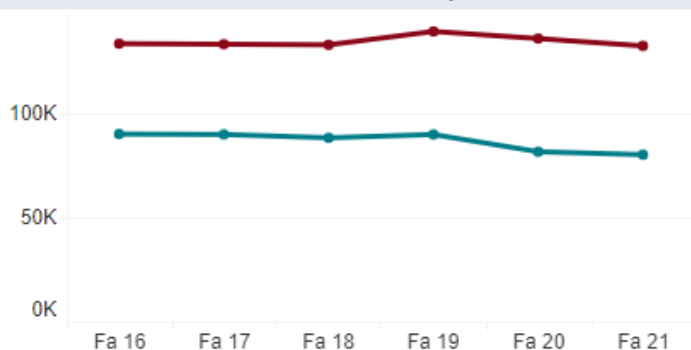
Female
Male

New Only (New/Returning Status) = students who are new to CU courses in NCCCS per term

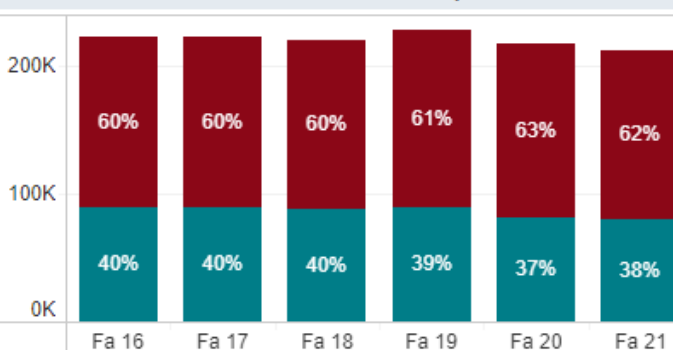
Source: CCSR

College: **NCCCS**, New/Returning Status: **All (New and Returning)**, Program Type: **All Programs**

CU enrollment over time by sex



CU enrollment distribution by sex



Total Instructional Activity

Overall By Acad. Level By Online By Tier By Location Distribution by Prefix Compare Colleges FTE Change Metric Details

Overall

Curriculum

Workforce

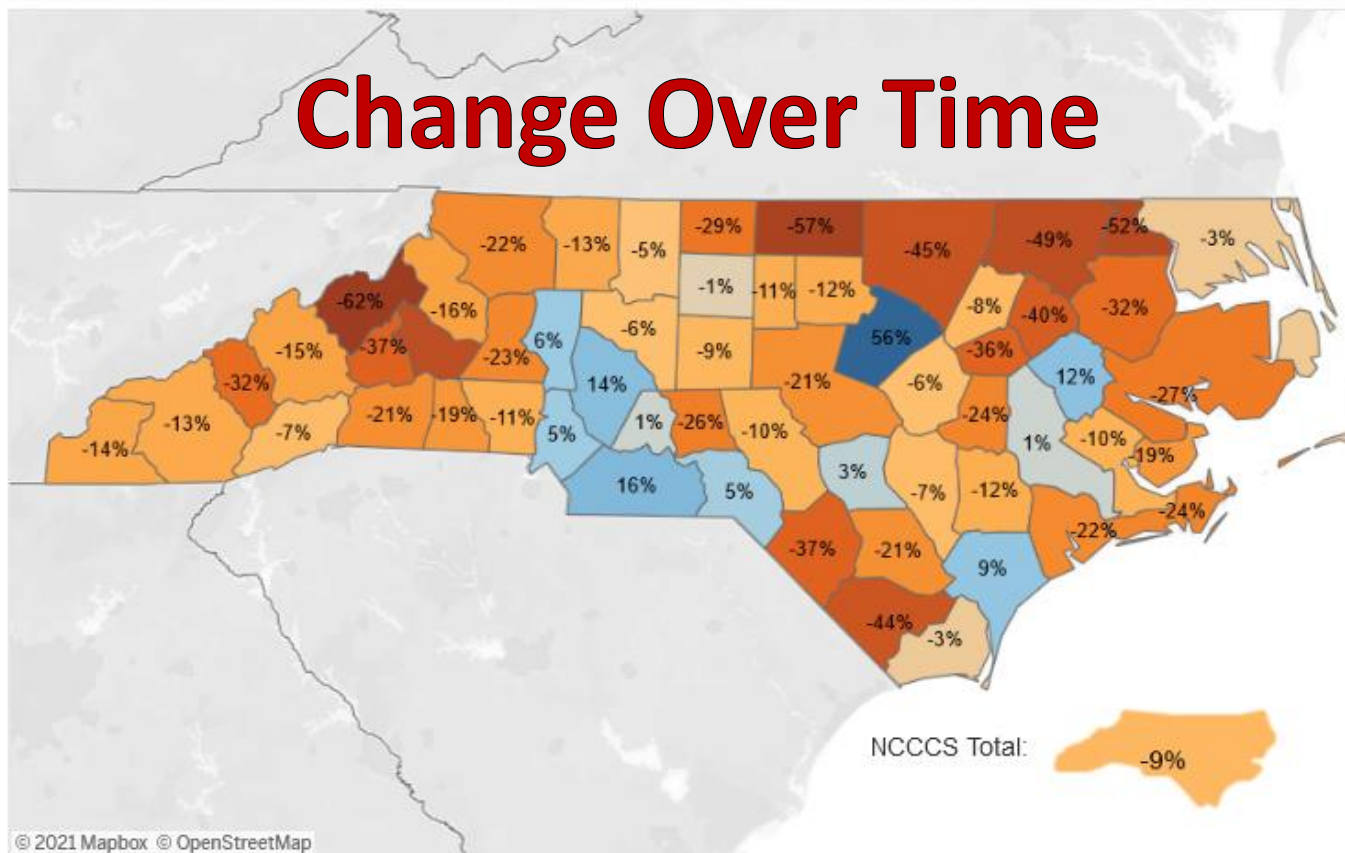
Basic Skills

Prefix

Change in Overall Instructional FTE

Time Period (Reporting Years): 06-07 to 20-21

Change Over Time



The filters below apply to the current page only.

Select Timeframe:

Reporting Years

First Time Period:

06-07 (Su06, Fa...

Second Time Period:

20-21 (Su20, Fa...

Data to Display

Percent Change



Note: Historical FTE converted to conform to current policy

FTE = Hours/512

SSS & ZZZ records excluded

Reporting Year = Summer, Fall, Spring

Curriculum Completion (PM5) - Institutional Outcomes

[Overview](#)[Demographics](#)[Characteristics](#)[Program](#)[Dual Enrollment](#)[Term Outcomes](#)[Metric Details](#)

Curriculum Completion - Term-by-Term Outcomes



This view enables the user to follow the progression of a selected cohort through the cohort's applicable terms. The blue portions of the bar indicate successful outcomes, the gray portion of the bar indicates non-success, and the orange portions of the bar indicate neutral outcomes (i.e., not yet success and not yet non-success). Summer terms are not displayed on these graphs; however, success rates are inclusive of summer terms in addition to fall and spring terms. Concurrent graduation and transfer outcomes are included in the "CC Grad" category.



Cohorts Over Time

Filters in red font will carry through to the other tabs of the dashboard. Filters in black font apply to the current page only.

Select College:

Alamance CC

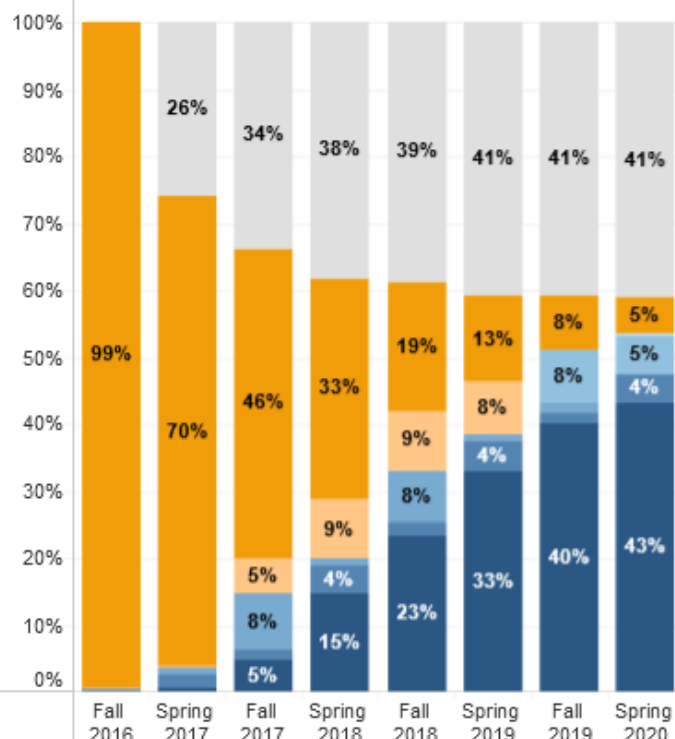
Cohort Fall Term:

Fall 2016

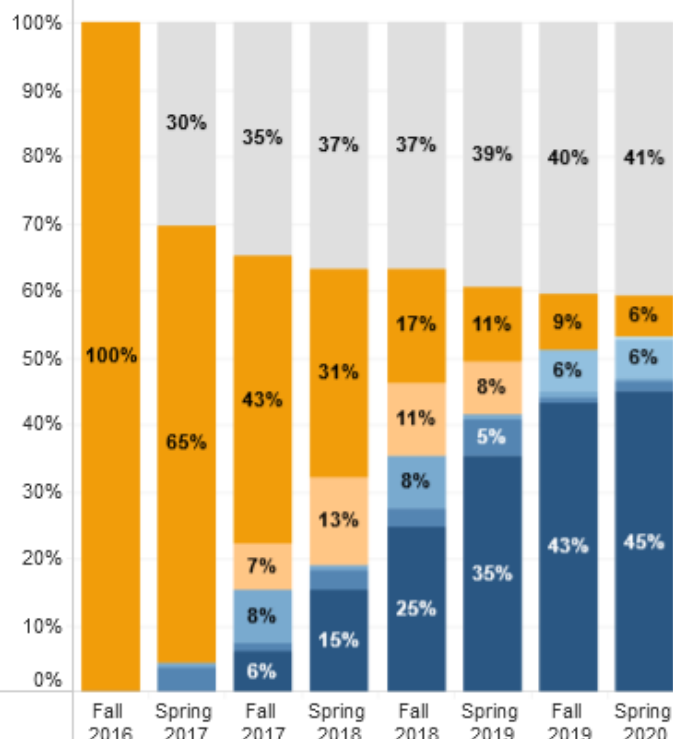
Show Graph By:

Result Type

NCCCS
Cohort: Fall 2016



College: Alamance CC
Cohort: Fall 2016



Sources: CCSR, Grad Extract, & NSC

Success Rate in College-Level Math (PM3) - Peer Comparisons

Overview Select College Demographics Characteristics Program Dual Enrollment Preparation Metric Details

Student Success Rate in College-Level Math

Percentage of first-time associate degree-seeking and transfer pathway students passing a credit-bearing Math course with a "C" or better within three years of their first fall term of enrollment



Filters in red font will carry through to the other tabs of the dashboard. Filters in black font apply to the current page only.

Select College:

NCCCS

Cohort Fall Term

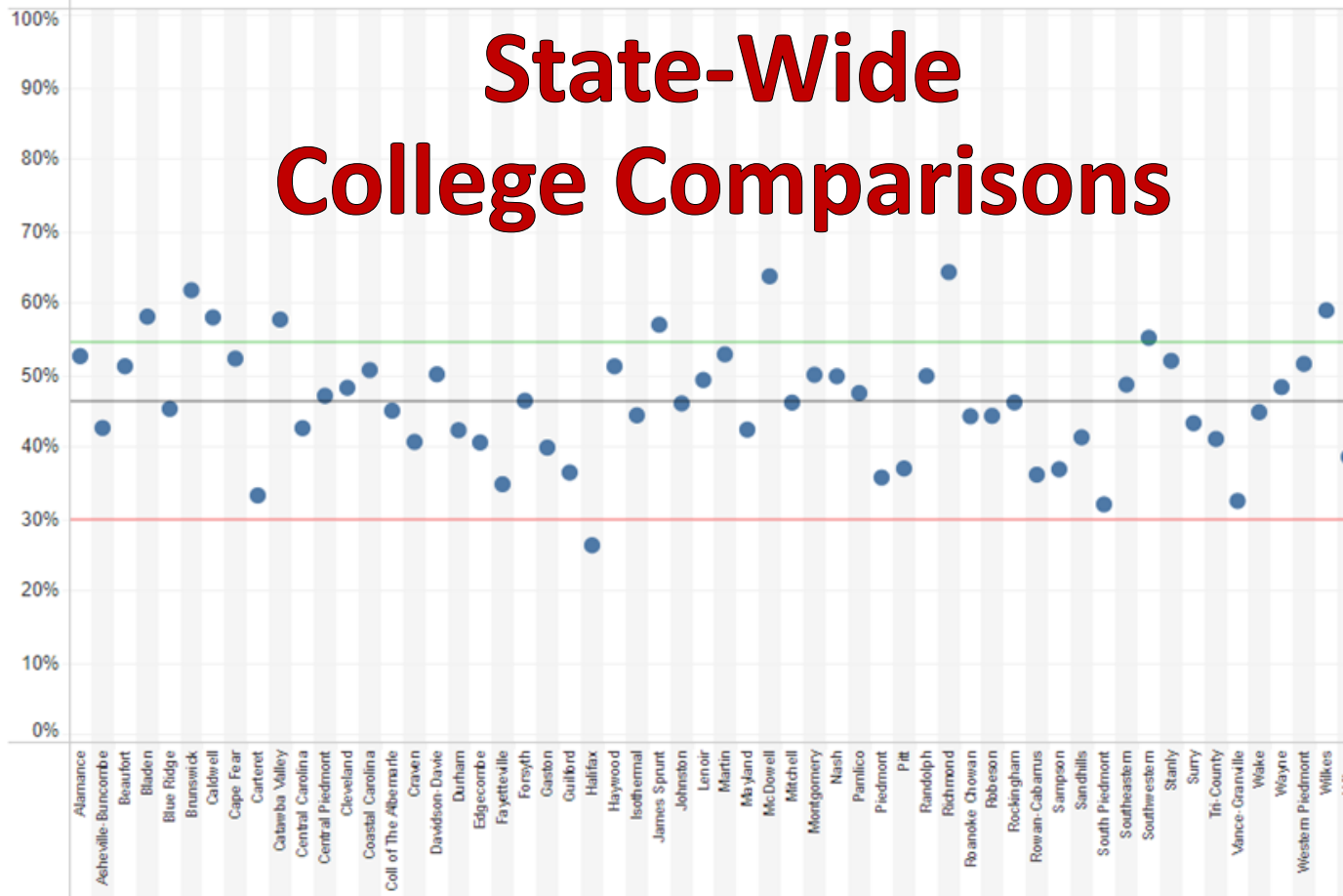
Fall 2017

Sort Graph By:

Alphabetical

Success Rate of All NC Community Colleges, Fall 2017 Cohort
Graph Sorted By: Alphabetical

State-Wide College Comparisons



Gray horizontal line denotes group average.

When graph is sorted alphabetically or high-to-low, the red horizontal line denotes the NCCCS Baseline level and the green horizontal line denotes the NCCCS Excellence level. Red/green lines will not display when graph is sorted in other configurations.

Headcounts <20 are suppressed.

Sources: CCSR & NSC

Success Rate in College-Level Math (PM3) - Peer Comparisons

Overview Select College Demographics Characteristics Program Dual Enrollment Preparation Metric Details

Student Success Rate in College-Level Math



The following pages display success rates of the selected college compared to the aggregated groupings below.
If no college is selected, no peer groupings will be displayed.
In addition to the groupings below, success rates will also be displayed for NCCCS and up to 5 peer institutions.

Filters in red font will carry through to the other tabs of the dashboard.

Alamance Peer Comparison Groups

Neighboring colleges	FTE size (scale 1-10): 7	Enrollment under 18 years old: 21-30%	Minority enrollment: 41-50%	Prosperity zone: Piedmont-Triad	County district tier: 2
Central Carolina	Alamance	Alamance	Alamance	Alamance	Alamance
Durham	Caldwell	Asheville-Buncombe	Central Carolina	Davidson-Davie	Caldwell
Guilford	Coastal Carolina	Craven	Craven	Craven	Carteret
Piedmont	Davidson-Davie	Durham	Durham	Durham	Catawba Valley
Randolph	Johnston	Brunswick	Nash	Randolph	Central Carolina
Rockingham	Sandhills	Carteret	Pamlico	Rockingham	Coastal Carolina
	Wayne	Craven	Pitt	Surry	Craven
		Davidson-Davie	Vance-Granville		Davidson-Davie
		Gaston	Wake		Forsyth
		Haywood	Wayne		Gaston
		Johnston			Guilford
		Nash			McDowell
		Rockingham			Montgomery
		Rowan-Cabarrus			Pamlico
		Stanly			Piedmont
		Wayne			Pitt
		Western Piedmont			Randolph
					Rowan-Cabarrus
					Southwestern
					Stanly
					Tri-County
					Vance-Granville
					Western Piedmont
					Wilkes

Peer Groupings

Select College:

Alamance

Cohort Fall Term:

Fall 2017

Select Peer 1:

Central Carolina ...

Select Peer 2:

Durham TCC

Select Peer 3:

None

Select Peer 4:

None

Select Peer 5:

None

Sources: CCSR & NSC

Success Rate in College-Level Math (PM3) - Peer Comparisons

[Overview](#)[Select College](#)[Demographics](#)[Characteristics](#)[Program](#)[Dual Enrollment](#)[Preparation](#)[Metric Details](#)

Student Success Rate in College-Level Math

Percentage of first-time associate degree-seeking and transfer pathway students passing a credit-bearing Math course with a "C" or better within three years of their first fall term of enrollment



Filters in red font will carry through to the other tabs of the dashboard. Filters in black font apply to the current page only.

Select College:

Davidson-Davie

Cohort Fall Term

Fall 2017

Sort Graph By:

FTE Size (scale ...)

Success Rate of All NC Community Colleges, Fall 2017 Cohort
Graph Sorted By: FTE Size (scale 1-10)

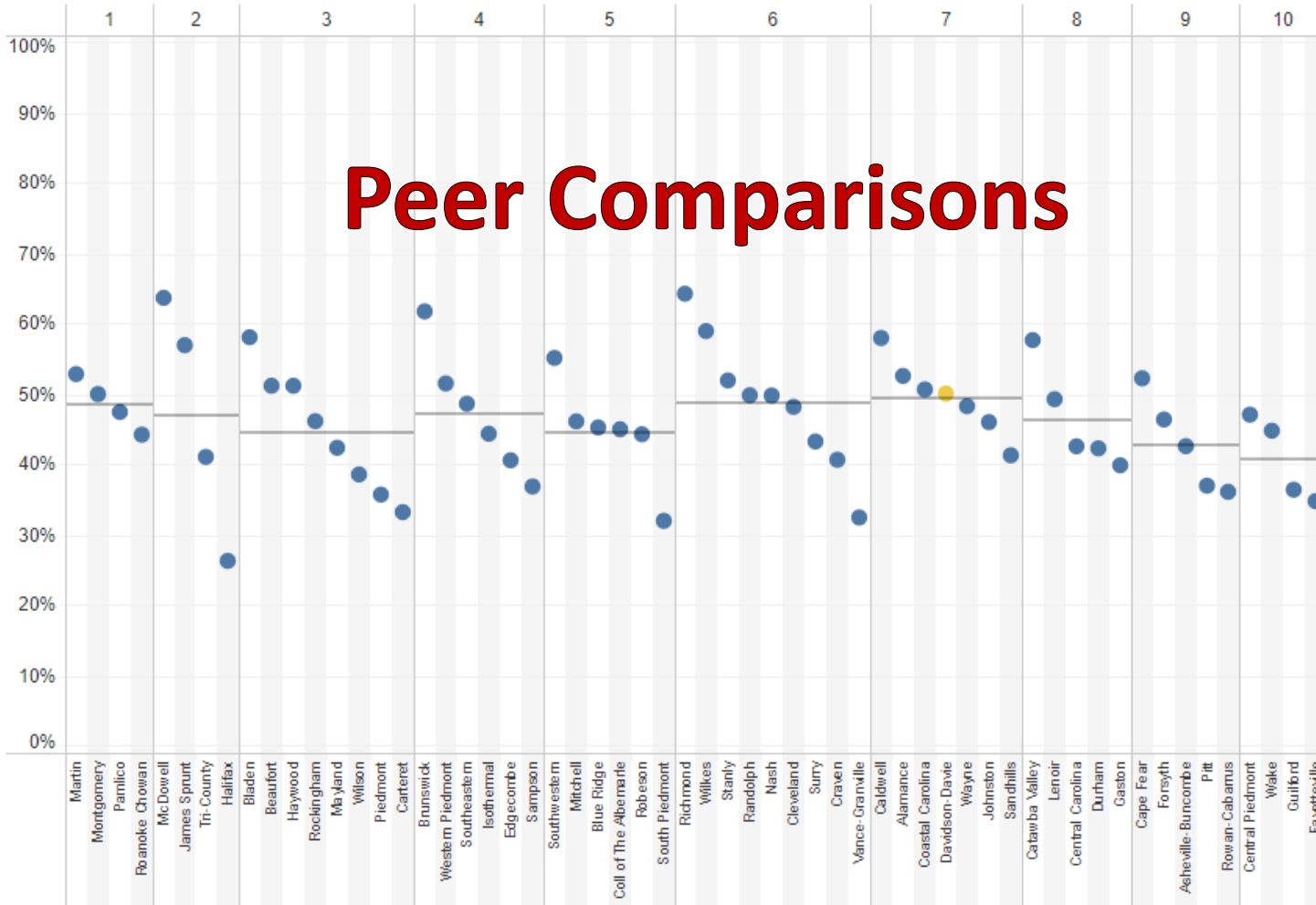
Peer Comparisons

Gray horizontal line denotes group average.

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Headcounts <20 are suppressed.

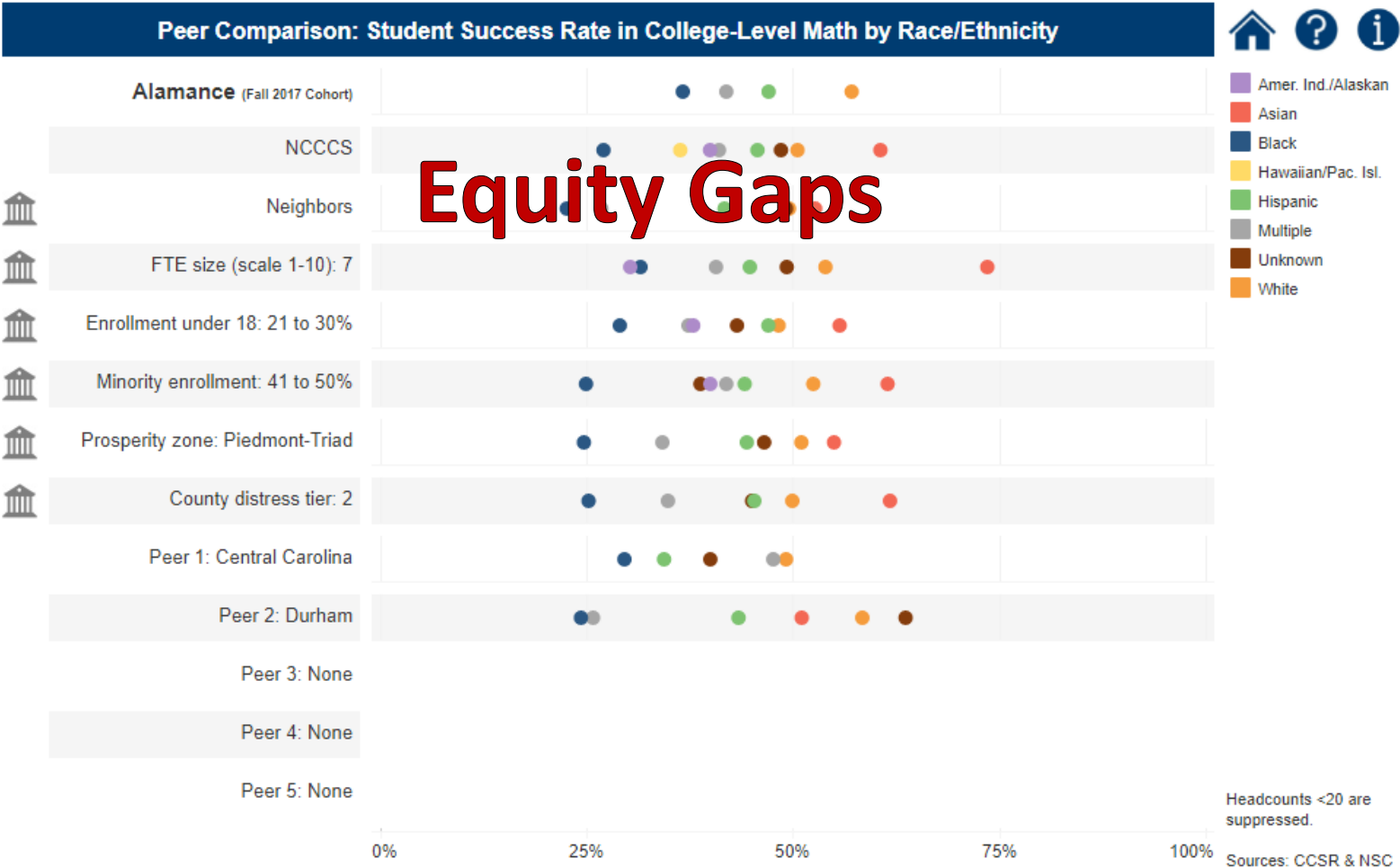
Sources: CCSR & NSC



Success Rate in College-Level Math (PM3) - Peer Comparisons

- Overview
- Select College
- Demographics
- Characteristics
- Program
- Dual Enrollment
- Preparation
- Metric Details

- Overall
- Sex
- Race/Ethnicity
- Race/Ethnicity & Sex
- Age Range
- Sex & Age Range



Curriculum Course Outcomes by Student Demographics

- Outcomes Overview
- Outcomes By Subject
- Outcomes by Course
- Compare Peers
- Compare Subjects
- Compare Courses
- Metric Details

↻

Overall

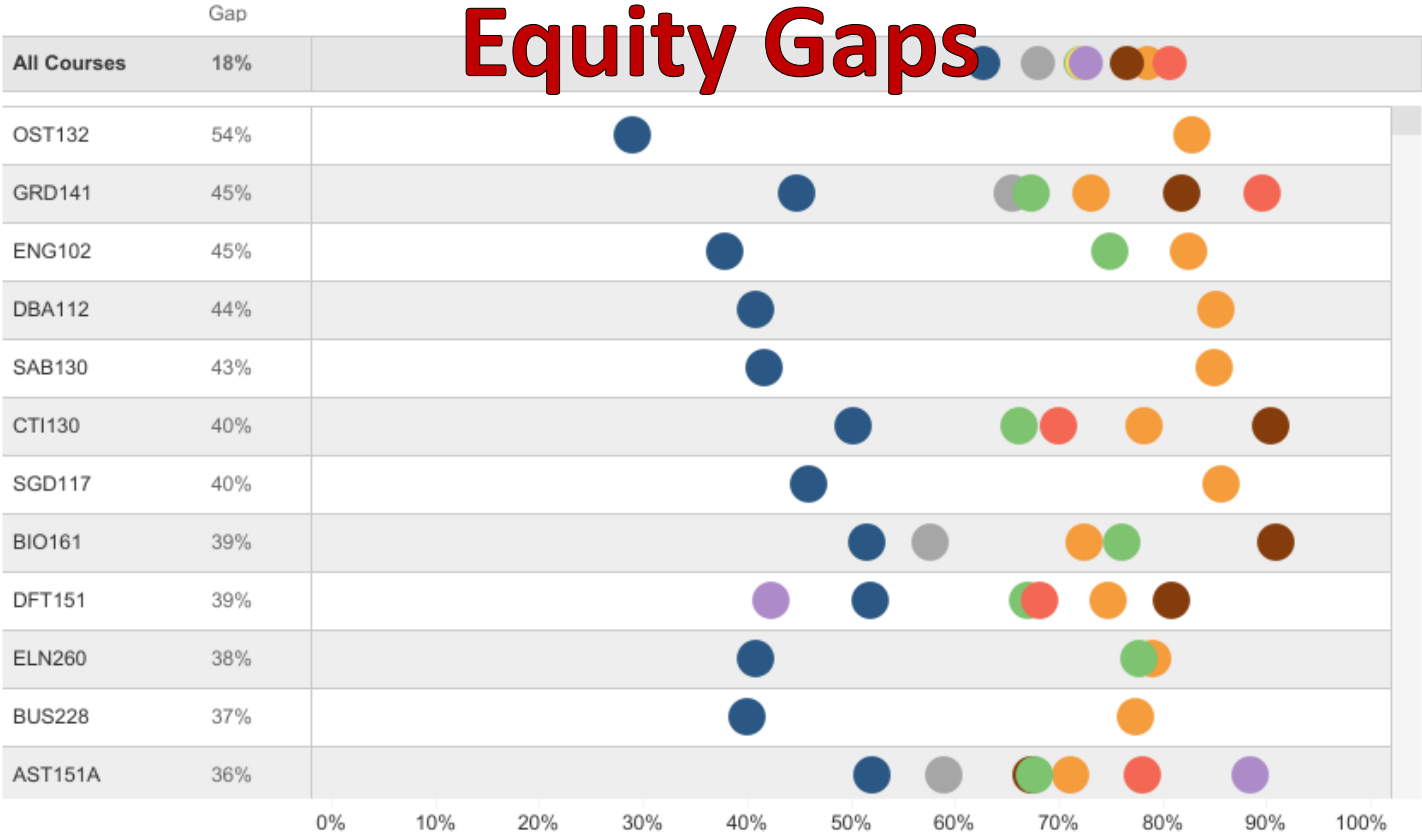
Sex

Race/Ethnicity

Age Range

Curriculum Course Success Rate by Course and Race/Ethnicity

NCCCS average course success rate (A/B/C/P) by race/ethnicity, Reporting Year: 20-21
Graph sorted by: Gap
Depending on number of rows included, graph may scroll down.



Changes to the filters below will affect this page only.

College

NCCCS

Reporting Year

20-21

Sort Graph By:

Gap

Subject

All Subjects

Click to highlight highest and lowest rates

- Amer. Ind./Alaskan
- Asian
- Black
- Hawaiian/Pac. Isl.
- Hispanic
- Multiple
- Unknown
- White

Outcomes suppressed when total graded enrollments <20. Courses listed without any data points had <20 graded enrollments per race/ethnicity. Total graded enrollments exclude AU and CE records.
Source: CCSR

Postsecondary Enrollment by High School

- Overview
- Demographics
- Compare High Schools
- Metric Details

- Overall
- Sex
- Race/Ethnicity
- Race/Ethnicity & Sex
- HS GPA
- ACT Composite
- Economically Disadvantaged

High School Comparisons: Postsecondary Enrollment by Race/Ethnicity



Postsecondary enrollment rate by race/ethnicity for high schools within **Pitt County Schools** (2009-2016 aggregate)
Graph sorted by: **Gap**

Changing the filter below will affect this page only. To change the filter selections for the entire workbook, use the "Overview" tab.

High School and LEA
Junius H Rose Hi...

Sort Graph By:
Gap

Click to highlight highest and lowest rates

- Amer. Ind./Alaskan
- Asian/Haw/Pac Isl
- Black
- Hispanic
- Multiple
- White

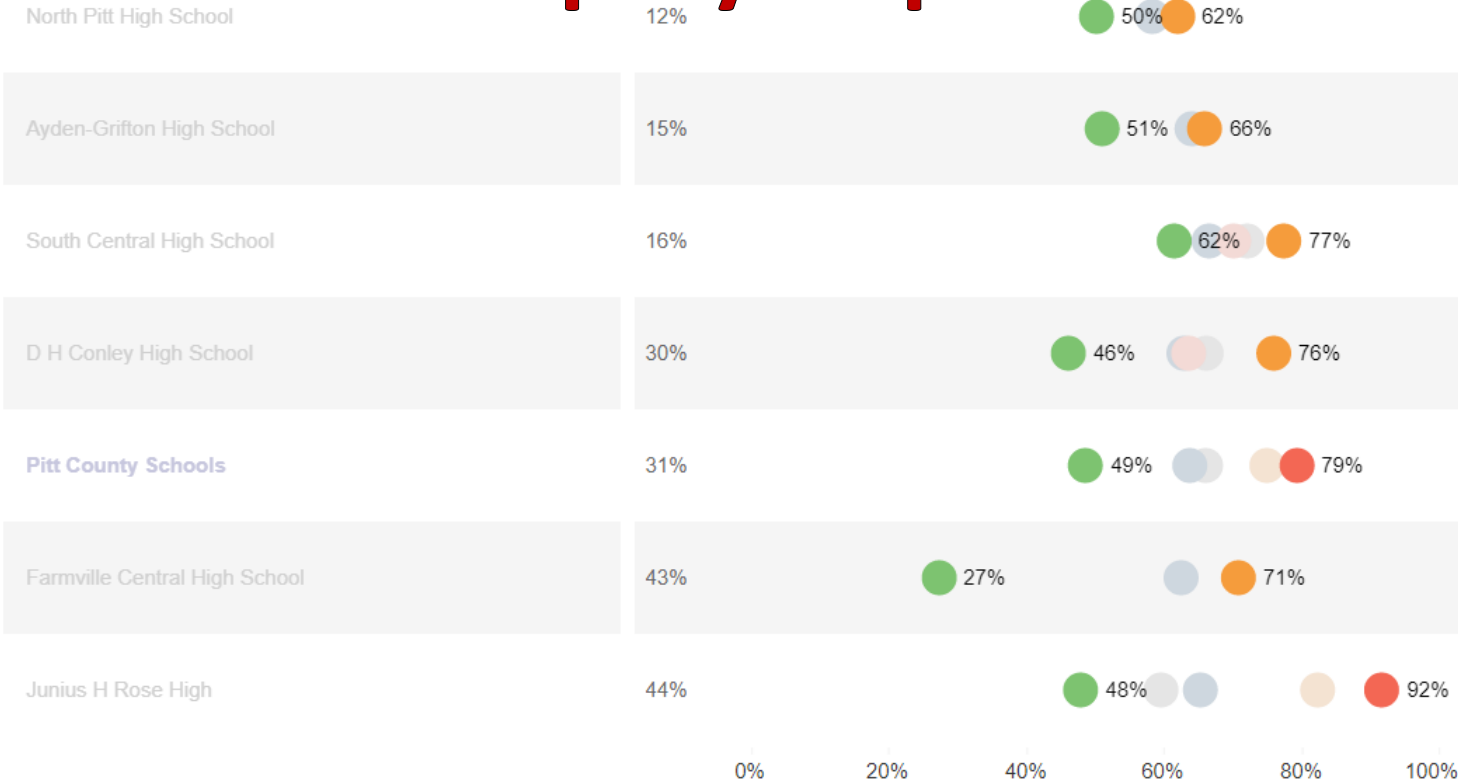
Graduating classes aggregated to 8 years to limit suppression.

High schools with <20 total graduates not listed.

* Headcounts less than 20 suppressed

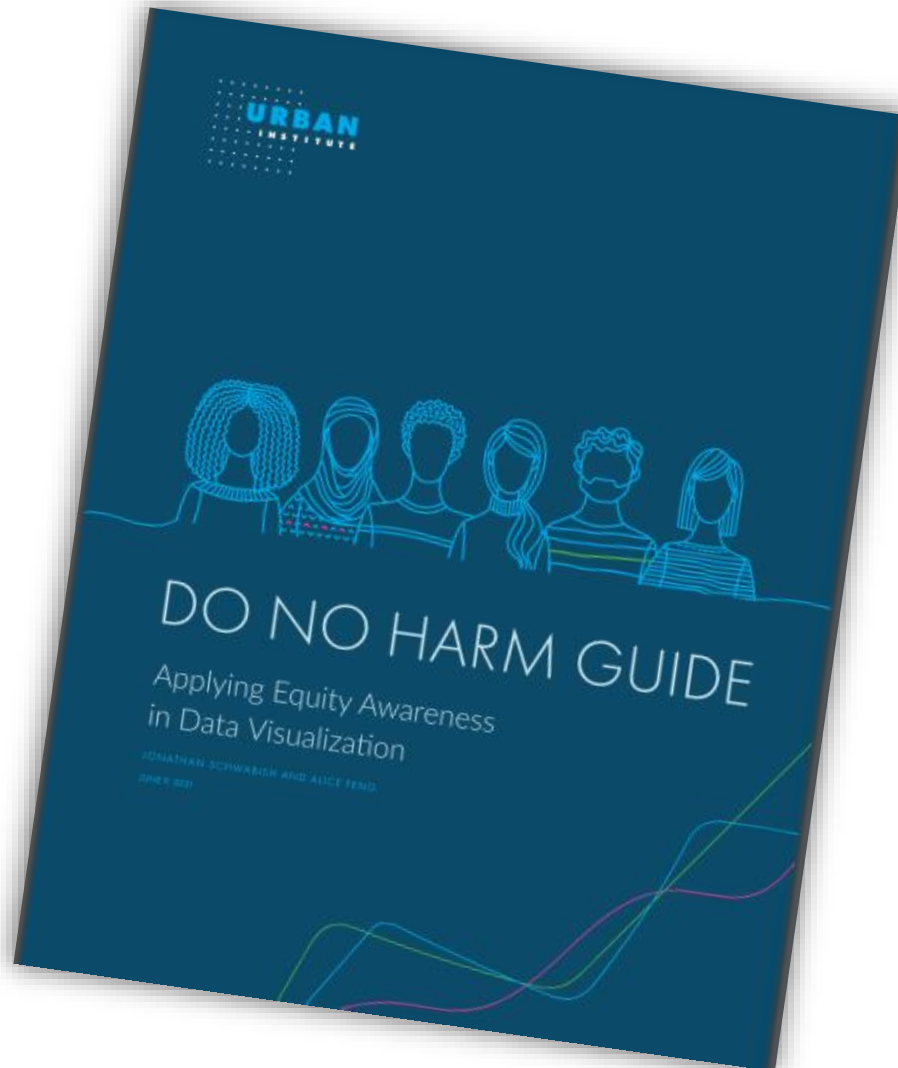
Sources: NC DPI & NSC

Equity Gaps





NCCCS Dashboards Do No Harm



<https://www.tableau.com/foundation/data-equity/do-no-harm>



Questions or Feedback

Contact us at

rpm@nccommunitycolleges.edu

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