Data Tools to Support Institutional Excellence: Teaching Productivity
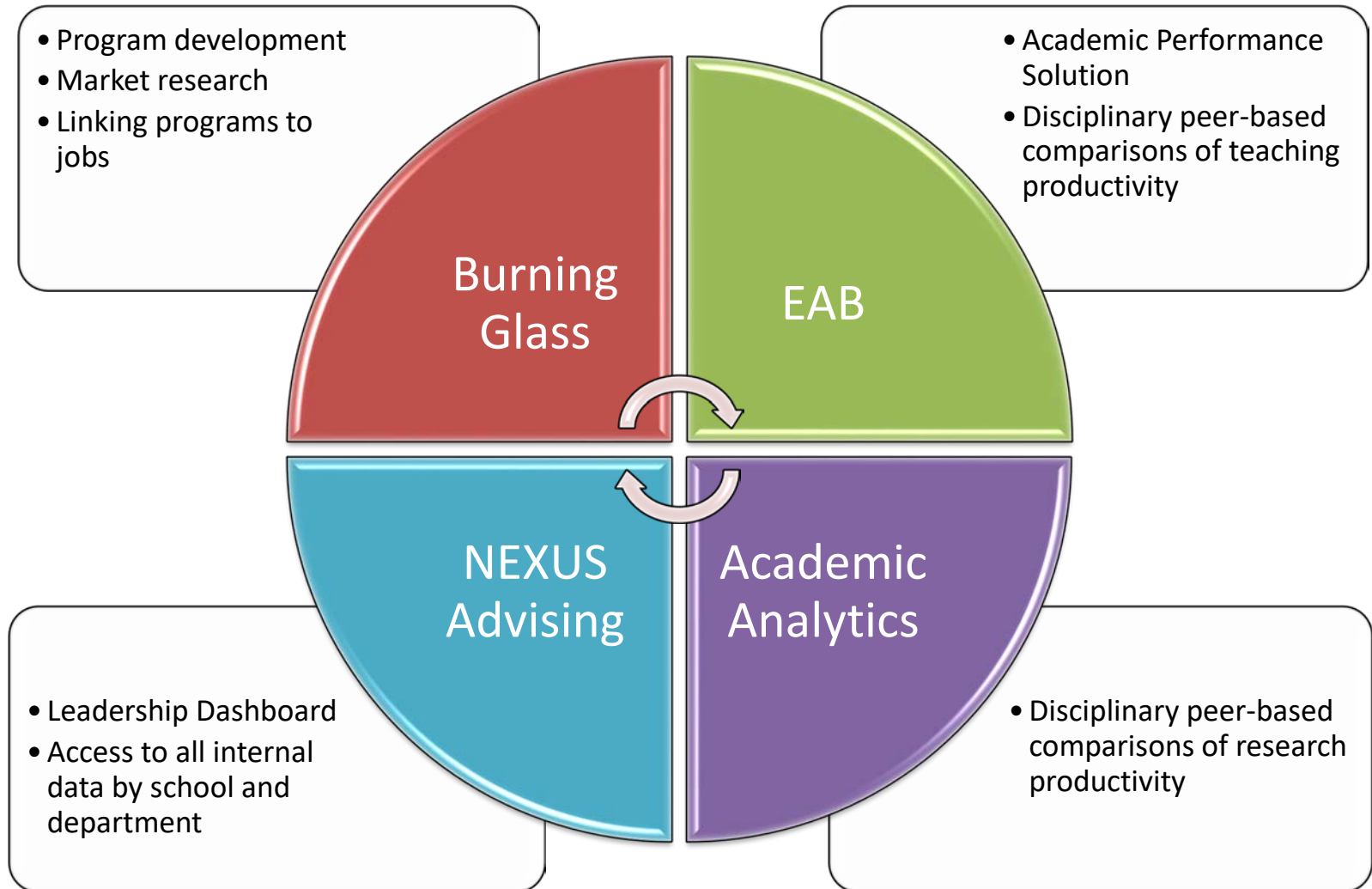
Lloyd Blanchard, PhD
Associate Vice President for Budget Management and Institutional Research

December 10, 2019

UCONN

Suite of Academic Data Tools

- Program development
- Market research
- Linking programs to jobs

- Academic Performance Solution
- Disciplinary peer-based comparisons of teaching productivity

Burning Glass

EAB

NEXUS Advising

Academic Analytics

- Leadership Dashboard
- Access to all internal data by school and department

- Disciplinary peer-based comparisons of research productivity

Download the APS Platform User Guide to get started

📊 APS Analytics

College Scorecard | Department Scorecard | Students | Courses | Programs | Instructional Staff

Key performance indicators to guide academic and operational decision-making.

Track Performance Across Academic Units

College and Department Scorecard highlights trends and comparisons on key College and Department metrics like enrollment, class utilization, cost per credit, hour, and other key indicators.

Resource Utilization Capacity Constraints

- **Students & Courses** pinpoints opportunities to improve course and section level completion rates, class utilization, etc.

- **Instructional Staff** exhibits the differences in teaching workload and overall metrics like completion rates and seat utilization between different types of instructors.

- **Costs** highlights the different cost categories that impact total costs and cost per credit hour.

See Help & Training for resources on using APS Analytics to improve efficiency and make data-informed decisions.

Download the Benchmarks User Guide

〽 APS Benchmarks

Cohort Profile | Institution KPIs | Enrollment | Course Completion | Course Planning | Other Departments
Instructional Workload | Instructional Cost | Configuration Summary

Department level performance comparisons to customized cohorts of APS members.

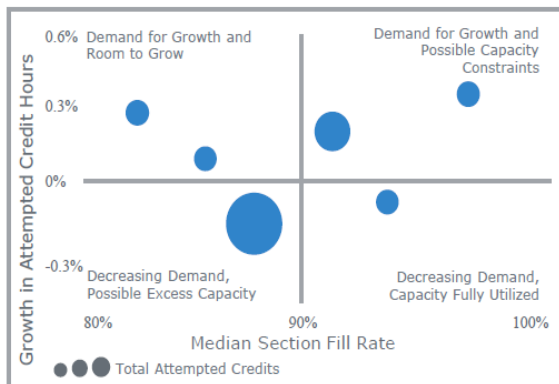Visit Webinars to watch the APS Benchmarks Boot Camp training series on using benchmarks.

Academic Performance Solution

- EAB's tool is the Academic Performance Solution

Course Planning

How can we align our resources to meet institutional and student needs?
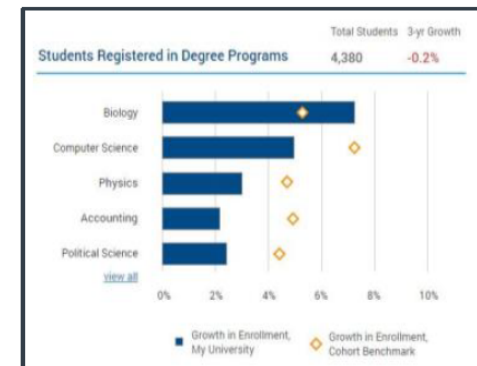

Student Progress

How can we redesign our courses or programs to improve student outcomes?

University Operations

How can we identify opportunities for resource reallocation and program growth?
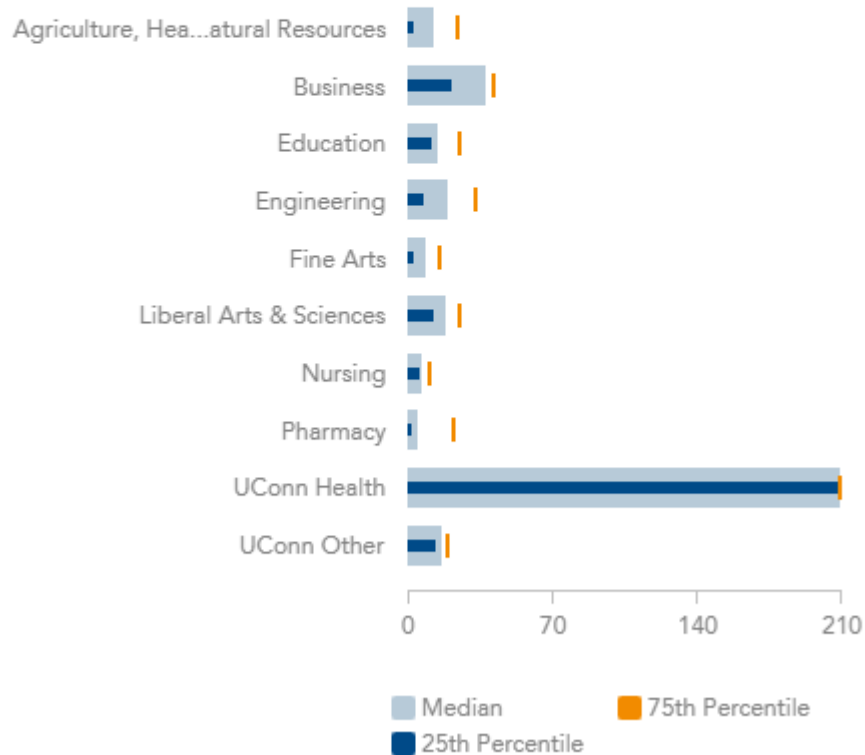
Courses

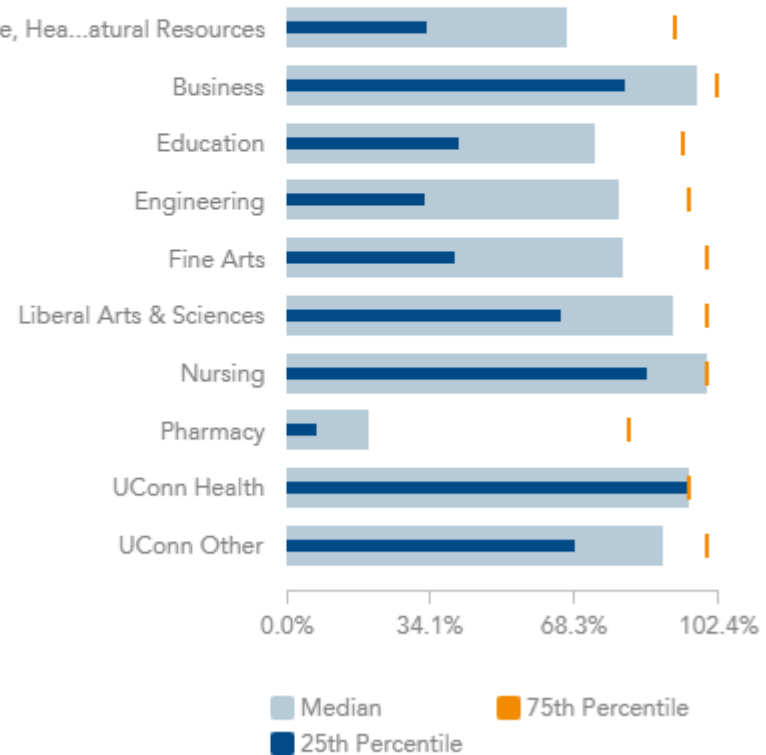The Student Attribute dashboard filters do not apply to the reports in the Courses section.

Class Size	Median Section Class Size	% of Classes with Size <10
	18	24.3%

Seat Utilization	Median Section Fill Rate	# of Collapsible Sections
	89%	364

Percentile Distribution of Class Sizes by College

Colleges (top to bottom): Agriculture, Hea...atural Resources; Business; Education; Engineering; Fine Arts; Liberal Arts & Sciences; Nursing; Pharmacy; UConn Health; UConn Other

X-axis: 0, 70, 140, 210

Legend: Median, 75th Percentile, 25th Percentile

Percentile Distribution of Section Fill Rates by College

Colleges (top to bottom): Agriculture, Hea...atural Resources; Business; Education; Engineering; Fine Arts; Liberal Arts & Sciences; Nursing; Pharmacy; UConn Health; UConn Other

X-axis: 0.0%, 34.1%, 68.3%, 102.4%

Legend: Median, 75th Percentile, 25th Percentile

Students

Enrollment

	# of Students Enrolled	3-Yr Trend Rate		Total Attempted SCH	3-Yr Trend Rate
Enrollment	18,818	-0.3%		258,253.0	-0.0%

Trends in Student Enrollment

Student Enrollment is based on the unduplicated headcount of students registering for coursework.
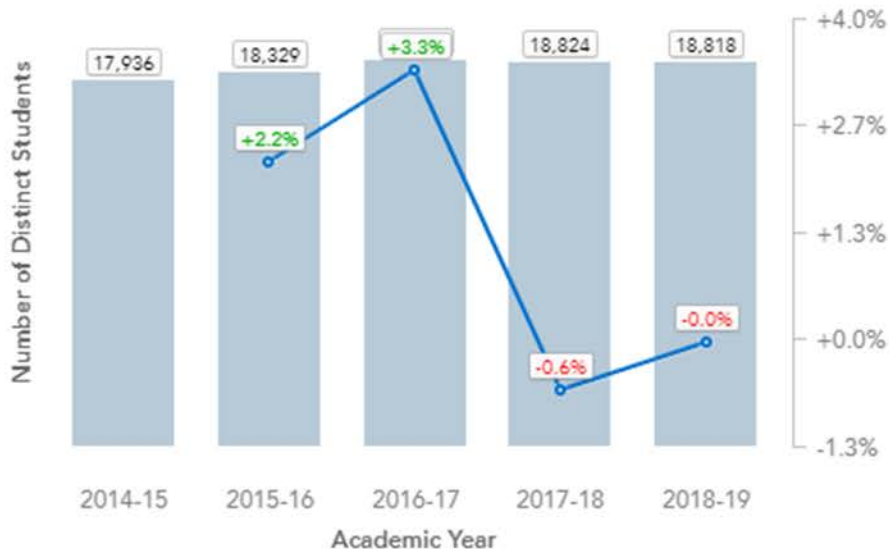
Legend:
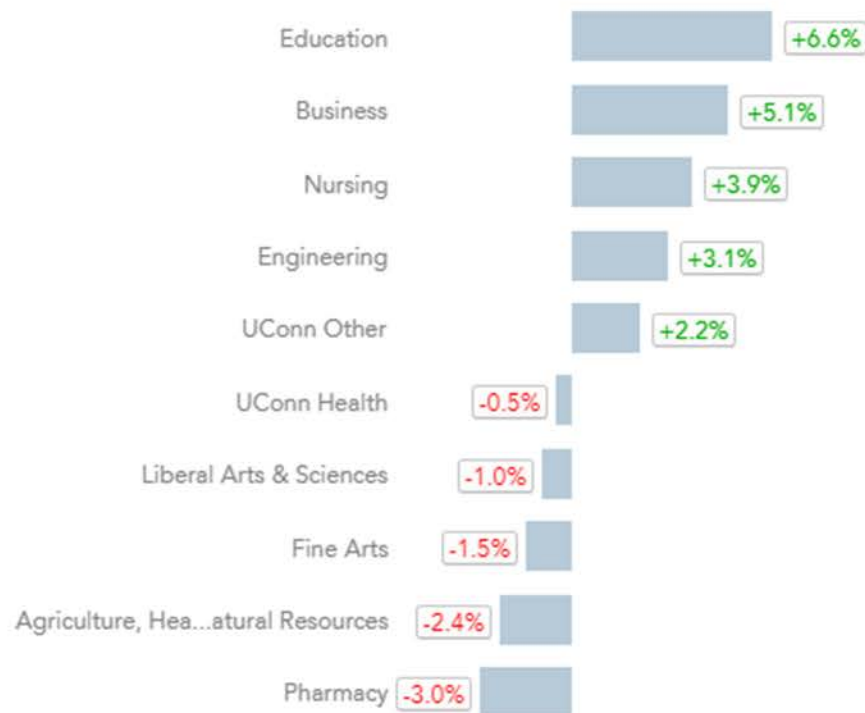- Number of Distinct Students
- Annual Percent Change [▲,%]

Bar values: 2014-15: 17,936 | 2015-16: 18,329 | 2016-17 (+3.3%) | 2017-18: 18,824 | 2018-19: 18,818

Annual Percent Change: 2015-16: +2.2%, 2016-17: +3.3%, 2017-18: -0.6%, 2018-19: -0.0%

Y-axis (left): Number of Distinct Students
Y-axis (right): +4.0%, +2.7%, +1.3%, +0.0%, -1.3%
X-axis: Academic Year

➔ **View Student Coursework Enrollment Trends By College**

3-Yr Growth in Attempted SCH by College

Click on the college name to view growth in Attempted SCH by Department

College	Growth
Education	+6.6%
Business	+5.1%
Nursing	+3.9%
Engineering	+3.1%
UConn Other	+2.2%
UConn Health	-0.5%
Liberal Arts & Sciences	-1.0%
Fine Arts	-1.5%
Agriculture, Hea...atural Resources	-2.4%
Pharmacy	-3.0%

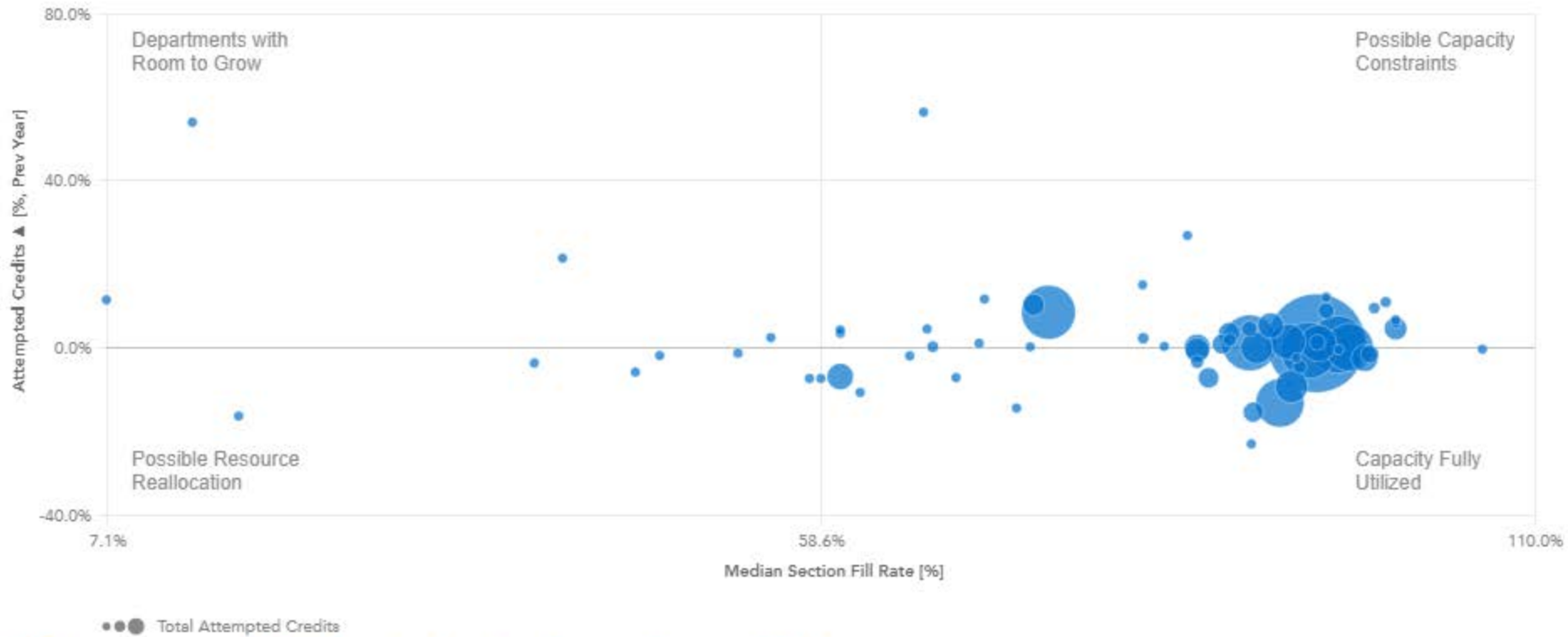➔ **View Attempted SCH Trends By College**

Capacity Planning

Department Growth Planning

Comparison of Demand vs Capacity by Department

Annual Percent Change in Attempted SCH vs Median Section Fill Rates

Departments with
Room to Grow

Possible Capacity
Constraints

Possible Resource
Reallocation

Capacity Fully
Utilized

Attempted Credits ▲ [%, Prev Year]

Median Section Fill Rate [%]

●●● Total Attempted Credits

➔ View Attempted SCH Growth vs Median Section Capacity By Dept.

Academic Performance Solution

Academic Program Review

Strategically evaluate department health on an annual basis.

Critical analyses:

Completion Rates

Enrollment Trends

Intercurricular Dependencies

Budget and Resource Allocation

Identify opportunities to standardize and streamline resource allocation decisions.

Critical analyses:

Course Bottlenecks

Costs per Student Credit Hour

Consolidation Opportunities

Course and Workload Planning

Improve student outcomes by aligning offerings with demand.

Critical analyses:

Seat Utilization

Distinct Course Offerings

Faculty Mix and Workload
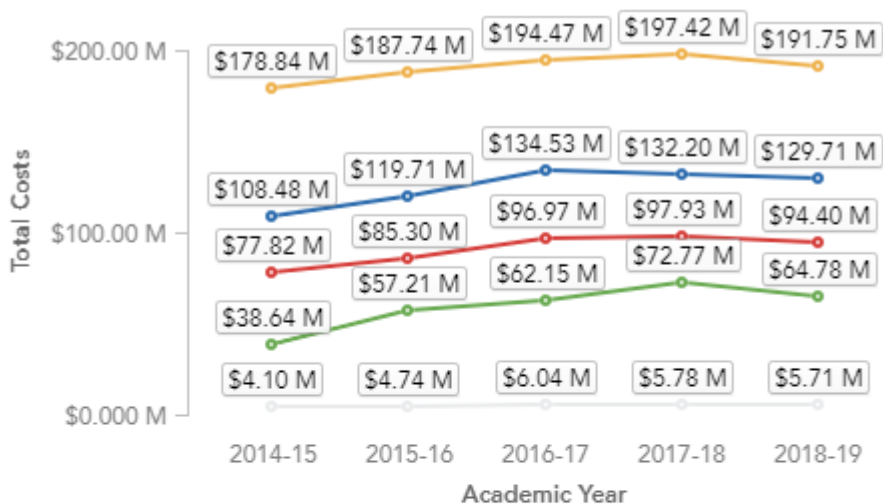
Costs

Total and Per Credit Hour Costs

Total Costs
$486.36 M

Cost Per Credit Hour
$599

Trends in Total Direct Costs by Account Category

Click on total costs to view line item details.

Total Direct Costs by Account Category

Click on total costs to view line item details.

Agriculture, Hea...atural Resources — $48.27 M
$57.53 M
Education — $27.89 M
$64.16 M
Fine Arts — $23.30 M
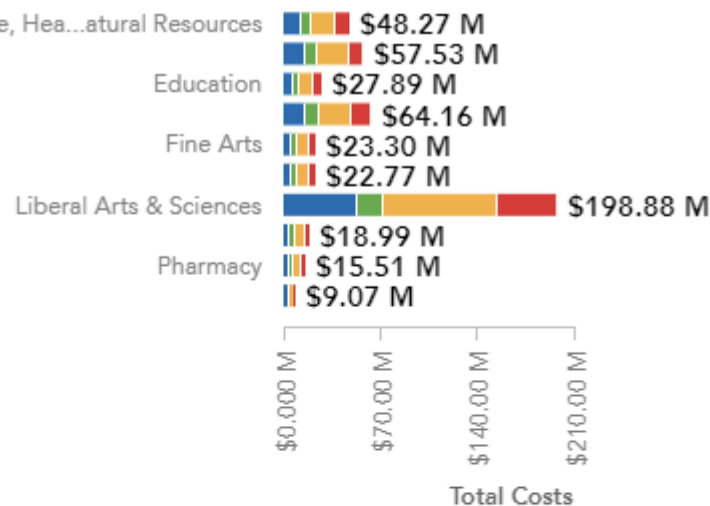$22.77 M
Liberal Arts & Sciences — $198.88 M
$18.99 M
Pharmacy — $15.51 M
$9.07 M

Total Costs

- Employee Benefits
- General Operational Expenses
- Instructional Staff Salaries
- Non-instructional Staff Salaries
- Student Compensation

Department-Level Course Planning Benchmarks

🏠 Back to APS Home

Cohort Weighted Averages are based on the proportion of total attempted credit hours taught per institution in the cohort. Weights change based on filter selections.

Choose Your Cohort
Best Match Do... ⌄

Choose Your College
All ⌄

APS Benchmark Filters

Time Period
ACADEMIC YEAR
2018-19 ⌄

TERM
All ⌄

University Attributes
DEPARTMENT
All ⌄

Course Attributes
COURSE TYPE
All ⌄

COURSE DIVISION
All ⌄

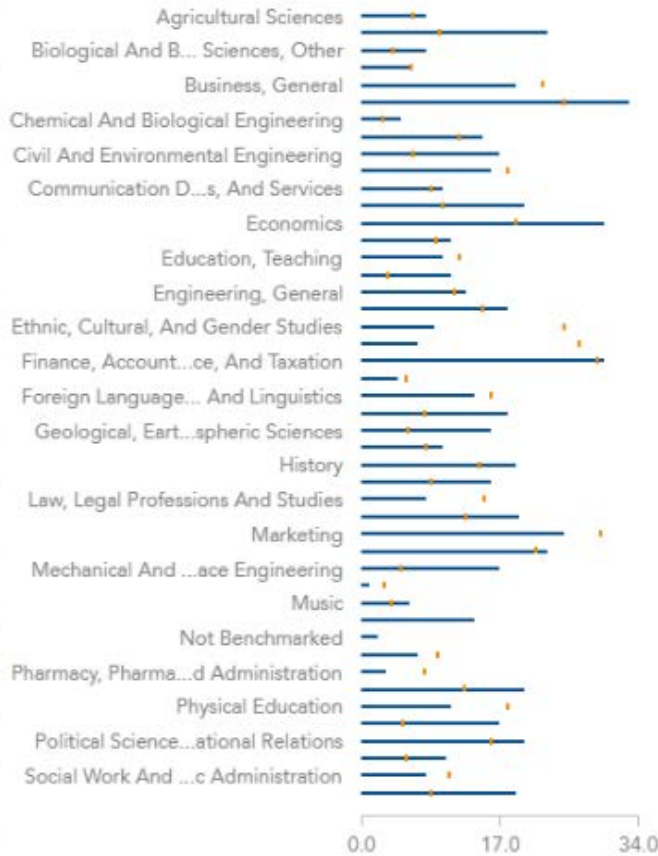COURSE LEVEL
All ⌄

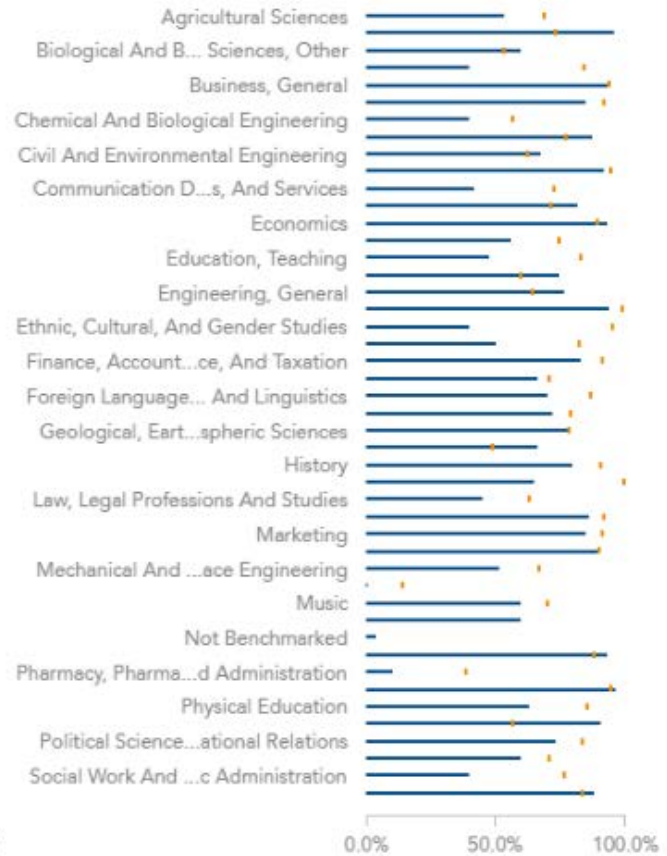**Student Attributes**
STUDENT LEVEL
All ⌄

STUDENT CLASSIFICATION
All ⌄

Apply

Median Class Size

- Agricultural Sciences
- Biological And B... Sciences, Other
- Business, General
- Chemical And Biological Engineering
- Civil And Environmental Engineering
- Communication D...s, And Services
- Economics
- Education, Teaching
- Engineering, General
- Ethnic, Cultural, And Gender Studies
- Finance, Account...ce, And Taxation
- Foreign Language... And Linguistics
- Geological, Eart...spheric Sciences
- History
- Law, Legal Professions And Studies
- Marketing
- Mechanical And ...ace Engineering
- Music
- Not Benchmarked
- Pharmacy, Pharma...d Administration
- Physical Education
- Political Science...ational Relations
- Social Work And ...c Administration

0.0   17.0   34.0

Median Class Fill Rate

- Agricultural Sciences
- Biological And B... Sciences, Other
- Business, General
- Chemical And Biological Engineering
- Civil And Environmental Engineering
- Communication D...s, And Services
- Economics
- Education, Teaching
- Engineering, General
- Ethnic, Cultural, And Gender Studies
- Finance, Account...ce, And Taxation
- Foreign Language... And Linguistics
- Geological, Eart...spheric Sciences
- History
- Law, Legal Professions And Studies
- Marketing
- Mechanical And ...ace Engineering
- Music
- Not Benchmarked
- Pharmacy, Pharma...d Administration
- Physical Education
- Political Science...ational Relations
- Social Work And ...c Administration

0.0%   50.0%   100.0%

■ My Institution
■ Cohort Weighted Average

Instructional Workload Benchmarks

🏠 Back to APS Home

Choose Your Cohort
Best Match Do... ⌄

Choose Your College
All ⌄

APS Benchmark Filters

Time Period
ACADEMIC YEAR
2018-19 ⌄

TERM
All ⌄

University Attributes
ASSIGNED DEPARTMENT
All ⌄

Staff Attributes
INSTRUCTOR TYPE
Tenured, Tenur... ⌄

INSTRUCTOR RANK
All ⌄

Course Attributes
COURSE TYPE
All ⌄

COURSE DIVISION
All ⌄

COURSE LEVEL
All ⌄

Instructional Workload Measures (per Instructor and per Instructional FTE)

Instructional Full-Time Equivalent (IFTE) is calculated as the Total Credit Hours Taught Per Instructor divided by the Full-Time Instructional Load.

	Median Workload Per Instructor		Total Workload Per IFTE	
	My Institution	Cohort (Median)	My Institution	Cohort (Median)
SCH Taught	163	222	240.7	441.1
Sections Taught	6	7	8.1	12.6
Credit Hours Taught	30	13	37.3	26.3

➡ View by Assigned Department and Instructor Type **per Instructor | per IFTE**
➡ View by Assigned Department and Instructor Rank **per Instructor | per IFTE**

Details on Selected Instructor Type(s) / Rank(s)

	Number of Instructors	% of Total Instructors	Total IFTE	IFTE to Instructor Ratio	Full-Time Instructional Load
My Institution	873	21.6%	779.0	0.9	18
Cohort (Median)	1,176	30.5%	910.3	0.6	Cohort distribution

Opportunities to Inflect Cost Per SCH

Use the reports in this section to determine which cost drivers you can adjust to inflect cost per SCH for the selected department(s). There are two ways to reduce this metric: decrease the numerator (lowering costs) or increase the denominator (increasing the SCH produced while holding costs constant).

Course Attributes

COURSE TYPE
| All ▾ |

COURSE LEVEL
| All ▾ |

Instructional Staff Attributes

ASSIGNED DEPARTMENT
| All ▾ |

1) Course Completion Rates

Credits are lost due to failing grades and student withdrawals from courses. Set goals to improve completion rates.

My Institution	Cohort 25th Percentile	Cohort Median	Cohort 75th Percentile
95.3%	93.2%	93.6%	94.3%

➔ View My Institution's Course Completion Rates

🛈 How to: Identify Opportunities for Course Completion Improvement

2) Median Section Size

Consider increasing section sizes to increase the SCH produced by a given instructor, reducing cost per SCH.

My Institution	Cohort 25th Percentile	Cohort Median	Cohort 75th Percentile
12	10	11	12

➔ View My Institution's Section Sizes

🛈 How to: Match Section Offerings with Demand

3) Median SCH Taught Per Instructor

Full-time instructors often teach less than the standard course load. Consider increasing the instructional workload of certain instructors.

My Institution	Cohort 25th Percentile	Cohort Median	Cohort 75th Percentile
123	110	142	184

➔ View Median Workload Per Instructor: By Type | By Rank

➔ View Total Workload Per IFTE: By Type | By Rank

🛈 How to: Make Data-Informed Faculty Line Requests

4) Instructor Mix

If your instructional salaries costs vary significantly from your peers, it may be due to the difference in instructor mix.

Standard Instructor Type

■ My Institution   ■ Cohort Median

How-to Guides

Enrollment growth
- Aligning Distinct Course Offerings with Enrollment Trends
    - Compare demand trends to course offerings to reveal potential misalignment of resources.

- Matching Section Offerings with Demand
    - Determine the right number of sections to efficiently use resources and avoid bottleneck courses.

- Measuring Student Demand for Courses
    - Assess student demand for courses to efficiently plan course offerings.

Cost efficiency
- Exploring Section Capacity Variation
    - Pinpoint variation in max caps to accurately measure instructional capacity.

- Monitoring Faculty Course Loads
    - Understand how students are interacting with faculty by evaluating metrics such as faculty mix and attempted student credit hours by instructor type.

- Supporting Budget Planning with Benchmark Data
    - Leverage benchmark data on capacity and completion rates to inform budget planning.

Let us help you!

Office of Budget and Planning (OBP)

Office of Institutional Research and Effectiveness (OIRE)

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