Decision Support Toolkit Users Guide

Instruction Insight Module

University of Colorado Denver
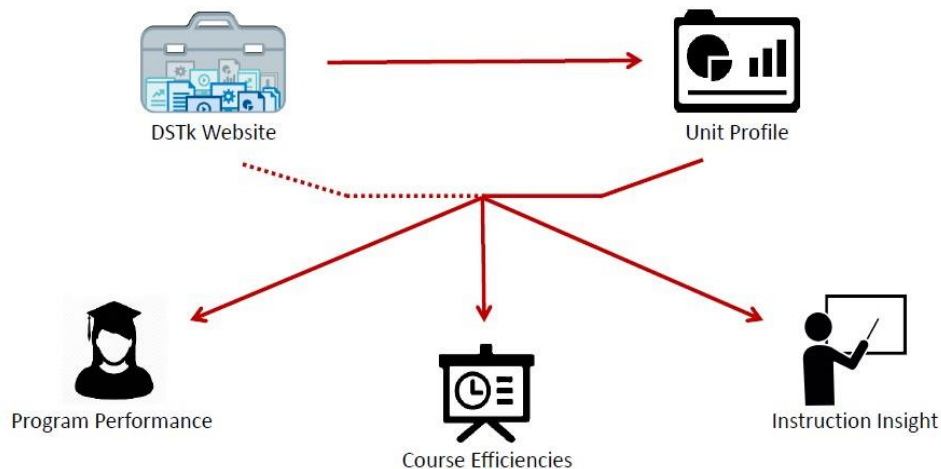Office of Institutional Research & Effectiveness and
The Budget Office

About the Decision Support Toolkit

The DSTk is a series of Tableau dashboards that bring together data visualizations that show important metrics and analysis to support academic and fiscal planning decision-making.

The Program Performance module provides comparisons and trends across your programs, with data on student headcount, student credit hours, demographics, and more. These metrics allow users to measure efforts and drive progress toward strategic priorities such as cost efficiency, student outcomes, equity and enrollment.

Connecting to Instruction Insight

Navigate to the DSTk Site to access any of the 4 modules that make up the Toolkit. You may also go directly to the Instruction Insight module in Tableau Server. Remember, you must be logged on to the campus network or VPN to access Tableau.

Navigating the Instruction Insight Module

The **Instruction Insight** module helps provide an understanding of how instructional resources are being utilized. Use the insights gained from this module to help make data-informed decisions on your faculty dynamics.

First, select your School or College: College of Liberal Arts and Sciences

Parameter Selection

Select Fiscal Year

2021

FY 2021 Faculty Snaphot: November of Fall 2020

Select FTE or Headcount

Headcount

Select Activities to Include

Main Campus Only (D...

The criteria selected above will carry through for the entire dashbaord

- Begin by setting your filters and parameters, which will apply to every metric on this page. Note: this module is based on faculty data as of November each fiscal year. Fiscal year totals of sections and credit hours are presented here.
- Remember to hover over graphs, reference lines, and information icons for additional detail.

School/College Comparison and Overview

- The table below allows users to compare growth in faculty headcounts, student credit hours taught and teaching load per faculty member across schools/colleges at CU Denver.
- Some sections have additional parameters that apply only to that section. Be sure to check each header for additional ways to splice, filter, or sort the data.

School/College Level Instructional Insight

Select a Faculty Type Tenured And Tenure Track Faculty ▼   Hover for Definition ⓘ

View some of your basic, high-level stats compared to the rest of CU Denver. Percentages in small unbolded font are 3-year changes.

	Instr. Faculty Headcount		Cost per SCH*	Tenured And Tenure Track Faculty					Trends Headcount | Credit Hours
				Headcount		Avg. Teaching Load		SCHs Taught	
College of Liberal Arts and Sciences	438	-5.4%	$172	179	0.6%	2.9	0.2%	30.9%	
Business School	107	0.9%	$207	46	-2.1%	2.7	-2.5%	30.9%	
College of Architecture and Planning	74	2.8%	$200	19	-5.0%	2.9	-17.3%	22.9%	
College of Arts and Media	112	7.7%	$147	30	-11.8%	4.5	10.9%	26.8%	
College of Engineering, Design and Computing	84	-6.7%	$269	46	-8.0%	3.1	-2.3%	40.4%	
School of Education and Human Development	167	3.1%	$221	34	-5.6%	2.8	2.6%	26.1%	
School of Public Affairs	51	2.0%	$262	18	-10.0%	2.7	8.8%	35.9%	

*Cost per SCH vlaues derived from selections made below. Lecturer data not available for metrics presented as FTE.

Instruction by Rank

- Student credit hours and sections taught can be explored in more detail here. Select your metric to gain insight on trends by faculty type.

- The expenditures section below shows the proportion of school/college expenditures supporting instructional faculty salary and benefits.

Instruction by Rank
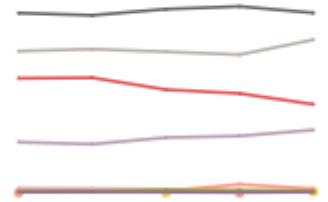Student credit hours and sections taught by Fall Faculty/Staff population

Full year sections and credit hours taught by only instructors included in Fall snapshot
Hover over the charts to get the details

Sections or student credit hours:

Credit Hours ▼

Trends:

Assistant, A....   Clinical Teac....   Exempt   Faculty Adm....   Lecture

Breaking Down Expenditures

- To calculate cost per student credit hour, users can choose to look at the default definition, shown here, or adjust the inputs to consider total S/C expenditures and/or any additional costs that are not included here.

- Hover over the Cost per SCH number to view the calculations.

FY 2021
$172 per SCH = ($27,213K in Faculty Fund 1x Expenditures) / 159K Main Campus (D1) SCHs

Breaking Down Expenditures
Faculty salaries and benefits as a portion of expenditures

Faculty Salaries and Benefits | All Other Expenditures
FY 2021 Fund 1x Expenditures Breakdown:

Trends:

FY 2021 Average Faculty Cost per Student Credit Hour:

Include Other S/C Expenditures?	No ▼
Additional Overhead?	No ▼
If yes, how much?	0%

Selections made here apply to all Cost per SCH metrics throughout this module

$172 per SCH

Trend:

The Breakdown section allows users to dig deeper into faculty and instruction data across their college

- The Instructional Capacity Gap tool allows users to conduct their own analysis of teaching loads by faculty type. Users set a unique target workload of sections taught in the fiscal year for that faculty type and the tool calculates the actual teaching load observed in the data.

Instructional Capacity Gap
Analyze your potential vs. actual sections taught

Choose Faculty Type
Tenured And Tenure Track Faculty ▼

Target Workload
3

- The output shows the difference between this target and the actual sections, resulting in a capacity "gap" that may identify an opportunity to further assess workloads for that faculty group.

- This tool also allows users to estimate the potential cost of that gap by inputting an estimated cost of hiring additional lecturers to teach courses within the gap.

Potential Sections	Actual Sections	Capacity Gap
528	- 513	= 15

Capacity Gap Trend

Based off of your average per section lecturer rate
Enter Here: $1,500

The potential cost of this capacity gap is equal to:

$22,500

Or, the amount paid to lecturers to teach sections in workload gap

- Users can also explore the teaching load distribution for the selected faculty type to identify outliers and among faculty members in your school/college or department.

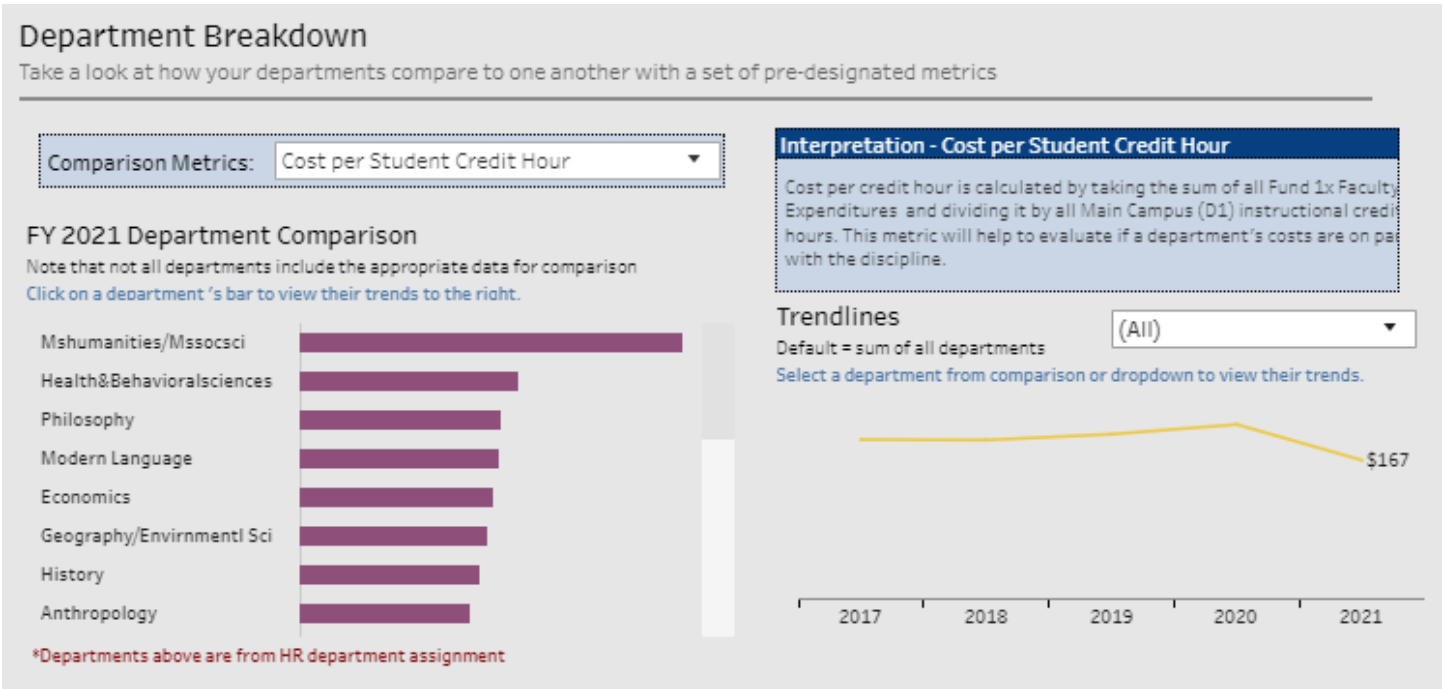**Teaching Load Distribution**
Tenured And Tenure Track Faculty
Filter this chart to a department by selecting one below

Headcount:		9	17	41	46	59	2	5
Sections:		0	1	2	3	4	5	6

- The Department Breakdown adds an additional layer of detail, allowing users to select comparison metrics and dynamically sort by metric to compare departments and evaluate trends.

Department Breakdown
Take a look at how your departments compare to one another with a set of pre-designated metrics

Comparison Metrics: Cost per Student Credit Hour ▼

FY 2021 Department Comparison
Note that not all departments include the appropriate data for comparison
Click on a department's bar to view their trends to the right.

- Mshumanities/Mssocsci
- Health&Behavioralsciences
- Philosophy
- Modern Language
- Economics
- Geography/Envirnmentl Sci
- History
- Anthropology

*Departments above are from HR department assignment

Interpretation - Cost per Student Credit Hour

Cost per credit hour is calculated by taking the sum of all Fund 1x Faculty Expenditures and dividing it by all Main Campus (D1) instructional credit hours. This metric will help to evaluate if a department's costs are on par with the discipline.

Trendlines
Default = sum of all departments

(All) ▼

Select a department from comparison or dropdown to view their trends.

$167

2017   2018   2019   2020   2021

- The table below shows headcount, teaching load and student credit hours taught in detail, broken down by department and faculty type.

Your Data at the Department Level
With what you've gathered from the analysis, use this area to dive deeper. Percentages in small unbolded font are 3-year changes.

Choose Grouping Order Department, Job Category ▼

Department, Job Category		Headcount		Average Teaching Load		SCHs Taught		Trends Headcount | Credit Hours
Anthropology	Tenured And Tenure Track Faculty	8	0.0%	3.0	14.3%	1,392	-8.5%	
	Regular Instructors	1	0.0%	9.0	0.0%	837	0.0%	
	Lecturers	6	0.0%	2.3	16.7%	1,411	0.9%	
Biology	Tenured And Tenure Track Faculty	17	6.3%	2.2	-16.8%	5,192	-9.1%	
	Clinical Teaching	1	0.0%	4.0	100.0%	843	61.5%	
	Regular Instructors	8	14.3%	4.8	-2.2%	8,356	-8.2%	
	Lecturers	4	-42.9%	1.8	2.1%	911	-58.2%	
	Tenured And Tenure							

*Lecturer data not available for metrics presented as FTE