



DATA DRIVEN DECISION MAKING AND UNIVERSITY IMPACT

Sponsored by
the Committee on Comprehensive Institutions



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AGENDA

- Why data matters?
- Developing strategies that meet institutional mission and objectives
- Commercial data management programs
- Historic use of data and its impact on your programs (mission)



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CHICAGO 
#CCAS2018

ORGANIZING THE INFORMATION (DATA) ACCORDING TO MISSION, OBJECTIVES, STRATEGIES: STRATEGIC



NEED FOR NEW APPROACHES

Why data matters

- Understand the needs of the institution
- Movement toward the mission and strategic objectives
 - Managing our access (e.g., students, faculty, staff)
 - Creating a future for the institution and the academy

Picking the right metrics

- Differentiating metrics for appropriate constituents
 - Students
 - Faculty (Faculty Development)
- The differences between numbers and numbers that matter



CREATING EDUCATIONAL EXPERIENCES THAT MEET OUR STUDENTS NEEDS



COOPERATIVE INSTITUTIONAL RESEARCH PROGRAM
at the HIGHER EDUCATION RESEARCH INSTITUTE AT UCLA

2014 CIRP Freshman Survey Institutional Profile Reports

California State University-Los Angeles

Comparison group 1: Public 4yr Colleges-low selectivity
Comparison group 2: Public 4yr Colleges



NSSE 2017 Engagement Indicators

About This Report

About Your Engagement Indicators Report

Engagement Indicators (EIs) provide a useful summary of the detailed information contained in your students' NSSE responses. By combining responses to related NSSE questions, each EI offers valuable information about a distinct aspect of student engagement. Ten indicators, based on three to eight survey questions each (a total of 47 questions), are organized into four broad themes as shown at right.

Theme	Engagement Indicator
Academic Challenge	Higher-Order Learning
	Reflective & Integrative Learning
	Learning Strategies
	Quantitative Reasoning
Learning with Peers	Collaborative Learning
	Discussions with Diverse Others
Experiences with Faculty	Student-Faculty Interaction
	Effective Teaching Practices
Campus Environment	Quality of Interactions
	Supportive Environment

Report Sections

Overview (p. 3)

Displays how average EI scores for your students compare with those of students at your comparison group institutions.

Theme Reports (pp. 4-13)

Detailed views of EI scores within the four themes for your students and those at comparison group institutions. Three views offer varied insights into your EI scores:

Mean Comparisons

Straightforward comparisons of average scores between your students and those at comparison group institutions, with tests of significance and effect sizes (see below).

Score Distributions

Box-and-whisker charts show the variation in scores *within* your institution and comparison groups.

Performance on Indicator Items

Responses to each item in a given EI are summarized for your institution and comparison groups.

Comparisons with High-

Comparisons of your students' average scores on each EI with those of students at institutions whose

Tableau

Interactive Table

Instructions: Select fields of your interest to create a table you need, using **Column Selection** and **Row Selection**. You can view the enrollment count or average unit load using the filter **Enrollment Count or Average Unit Load**.

Enrollment Count or Average Unit Load
 Avg. Unit load

Column Selection level 1
 Gender

Column Selection level 2
 Enrollment Type

Row Selection level 1
 Student Level

Row Selection level 2
 First Generation

		Female		Male		Grand Total
		Continuin..	New Gra..	Continuin..	New Gra..	
Freshman	4-Year College Degree or Hig..	13.98		12.57		13.47
	First Generation	13.26		13.3		13.27
	Some College or 2-Year Colle..	13.62		13.33		13.54
	Unknown	13.5		12.83		13.17
Graduate	4-Year College Degree or Hig..	7.52		7.1		7.31
	First Generation	7.34		7.19		7.26
	Some College or 2-Year Colle..	7.05		7.66		7.24
	Unknown	7.44	6.39	7.2	7.69	7.03
Junior	4-Year College Degree or Hig..	13.8		13		13.48
	First Generation	12.81		12.62		12.75
	Some College or 2-Year Colle..	12.79		13.26		12.95

Filter data in the Interactive Table by using the drop-down menus below.

Term & Year:
 Spring 2018

Student Level:
 (All)

College:
 NSS

Department:
 (All)

Plan:
 (All)

Subplan:

Disaggregating the data to address equity concerns.

FACULTY HIRING

Use the data to ensure understanding of instructional personnel (e.g., professor, associate professors, assistant professors, lecturer (part-time and full time))

Faculty Headcount

Faculty Headcount has no duplicates, it is based on highest FTE, if FTE are equal then oldest/first appointment. *Department assignment is based on HR data.*

Instructions for more details:
 Hover over "Class" in the table header and click the "+" sign to drill down to "Rank".
 Hover over "Rank" in the table header and click the "+" sign to drill down to "Name".
 Hover over the table header again and click "-" sign to drill up.

College	Department	Class	Year	Ethnicity	Gender	Name
All	All	All	All	All	All	All
College	Department	Class	Rank	Fall 2016	Fall 2017	Fall 2018
	Tenure Track	Assistant Professor		2	3	5
		Associate Professor		2	1	1
		Full Professor		8	9	9
		Total		12	13	15
	FERP	FERP Full Professor		3	3	2
		Total		3	3	2
	Lecturer	Lecturer		20	24	31
		Total		20	24	31
	Total			35	40	48
	Lecturer	Lecturer		3	4	3
		Total		3	4	3
	Total			3	4	3
	Tenure Track	Assistant Professor		5	8	6
		Associate Professor			2	2
		Full Professor		5	6	4
		Total		10	14	12
	Lecturer	Lecturer		23	26	29
		Total		23	26	29
	Total			33	40	41
	Tenure Track	Assistant Professor		2	2	3
		Associate Professor		6	6	4
		Full Professor		10	7	7
		Total		18	15	14
	FERP	FERP Full Professor		2	4	3
		Total		2	4	3
	Lecturer	Lecturer		62	56	49
		Total		62	56	49
	Total			82	75	66

Making the case for faculty hires to faculty development and support

IMPACT

- Work out if the costs and effort are justified
- Collect data
 - Integrity and convergence in the data
- Analyze data
- Present and distribute the insights
- Incorporate the learning into the program
- Know the basics of data visualization



Math 1081 and Math 1082 Midterm 1 Analysis

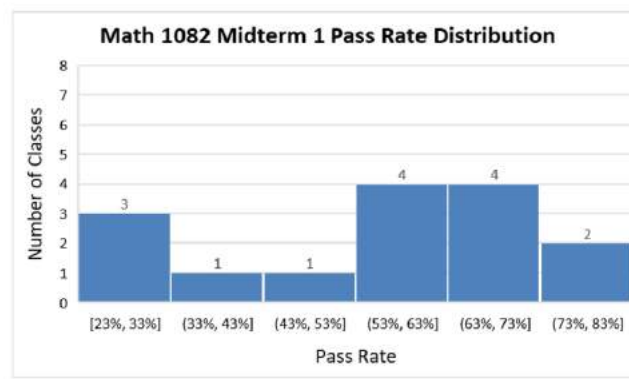
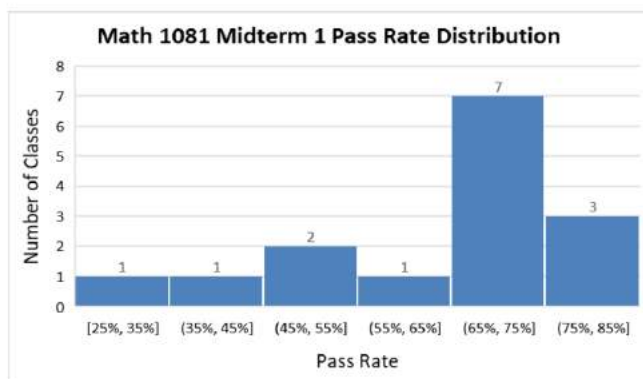
I. Pass Rates by Class

Math 1081					
Section	Instructor	Size	Absences	# of S	Pass Rate
1		27	0	27	51.9%
2		27	0	27	67.0%
3		27	0	27	74.0%
4		28	2	26	85.0%
5		28	1	27	74.0%
6		27	2	25	64.0%
7		26	3	23	70.0%
8		27	1	26	69.0%
9		24	2	22	77.0%
10		27	0	27	67.0%
11		25	2	23	73.0%
12		27	2	25	25.0%
13		23	1	22	39.1%
14		21	1	20	55.0%
15		21	0	21	76.0%
Average Pass Rate					64.6%
Standard Deviation					15%

Math 1082					
Section	Instructor	Size	Absences	# of S	Pass Rate
1		30	3	27	41.0%
3		28	1	27	70.0%
5		28	2	26	23.1%
7		31	2	29	71.0%
9		30	0	30	67.0%
11		30	3	27	26.0%
13		30	2	28	32.1%
15		30	1	29	53.6%
17		28	0	28	53.6%
19		30	1	29	65.5%
21		30	1	29	44.8%
23		29	2	27	63.0%
25		27	2	25	80.0%
27		27	0	27	60.0%
29		30	0	30	78.0%
Average Pass Rate					55.5%
Standard Deviation					18%

Math Redesign Efforts/ Faculty Development

- Present and distribute the insights
- Incorporate the learning into the program
- Know the basics of data visualization

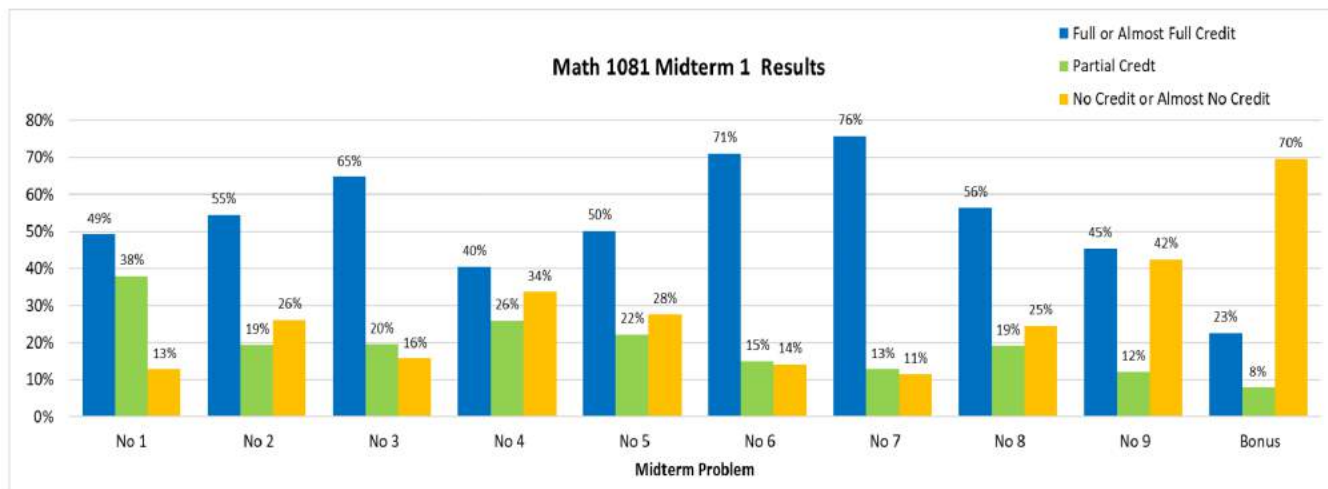


Math 1082

Problem	Task	Full or Almost Full Credit	Partial Credit	No Credit or Almost No Credit
No. 1	Solve a system of equation. Write the general solution.	39%	34%	26%
No. 2	Evaluate a function using algebraic expression	46%	21%	33%
No. 3	Evaluate a piecewise function at 3 input values	46%	25%	28%
No. 4	Find the composition of two functions and its domain.	28%	30%	42%
No. 5	Find the domain, range, and the y-intercept of a given graph.	43%	32%	25%
No. 6	Write the equation of a transformed function	71%	18%	11%
No. 7	Use function notation to represent data point in a word problem.	70%	16%	14%
No. 8	Obtain the graph of a function using transformations	52%	24%	24%
No. 9	Apply the system of equations to solve a word problem	50%	14%	36%
Bonus	Find and simplify the composition of two rational function.	16%	24%	60%

Math Redesign Efforts

- Present and distribute the insights
- Incorporate the learning into the program
- Know the basics of data visualization





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Commercial Data Management Programs Overview

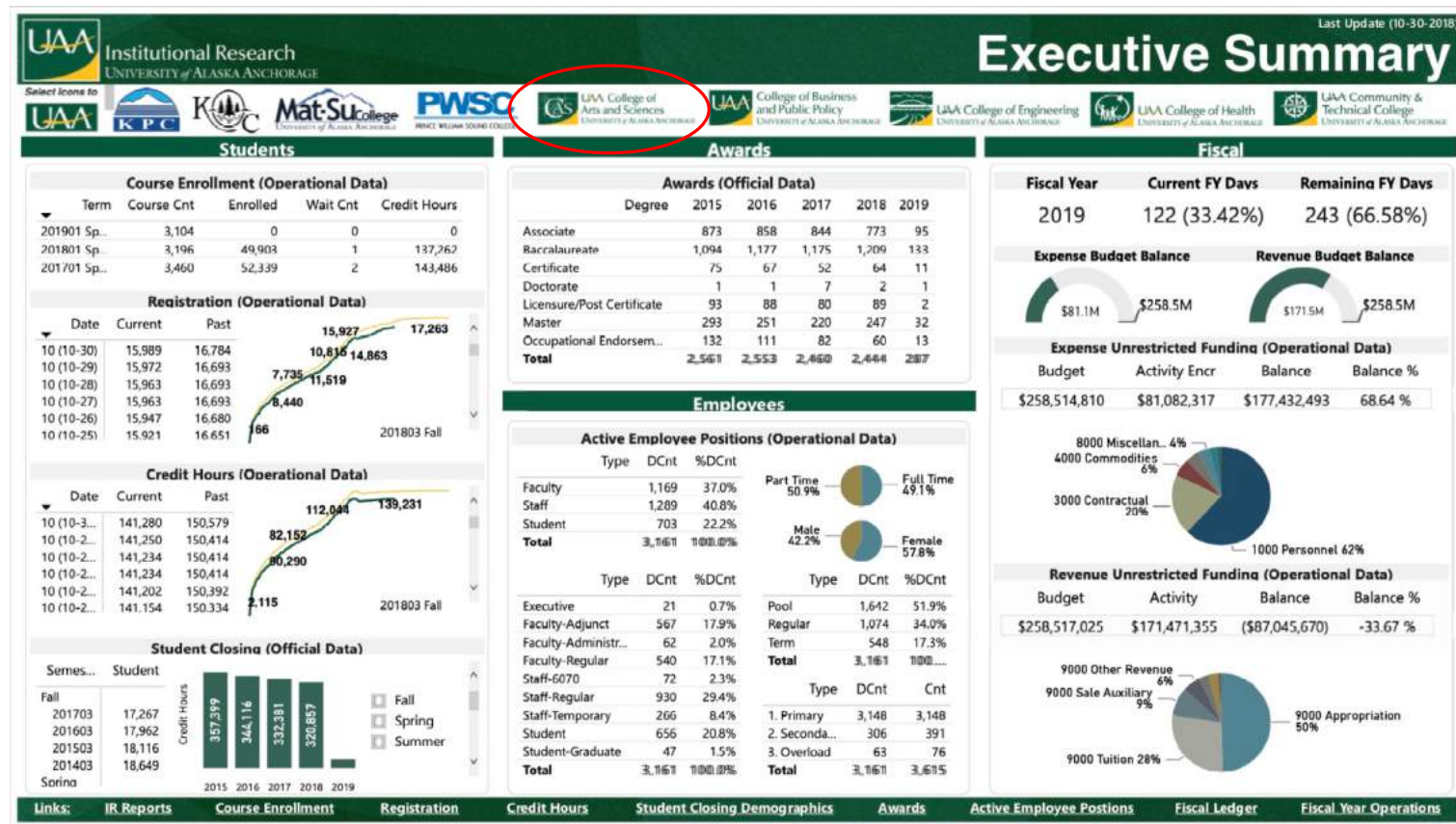
Tableau and Share Point

- Customizable Data Tables
- Customizable Dashboards
- Data Visualization
- Budget Monitoring and Forecasting
- Automated Report Updating
- Ad Hoc Analysis and Reporting
- Benchmarking to Other Institutions Difficult

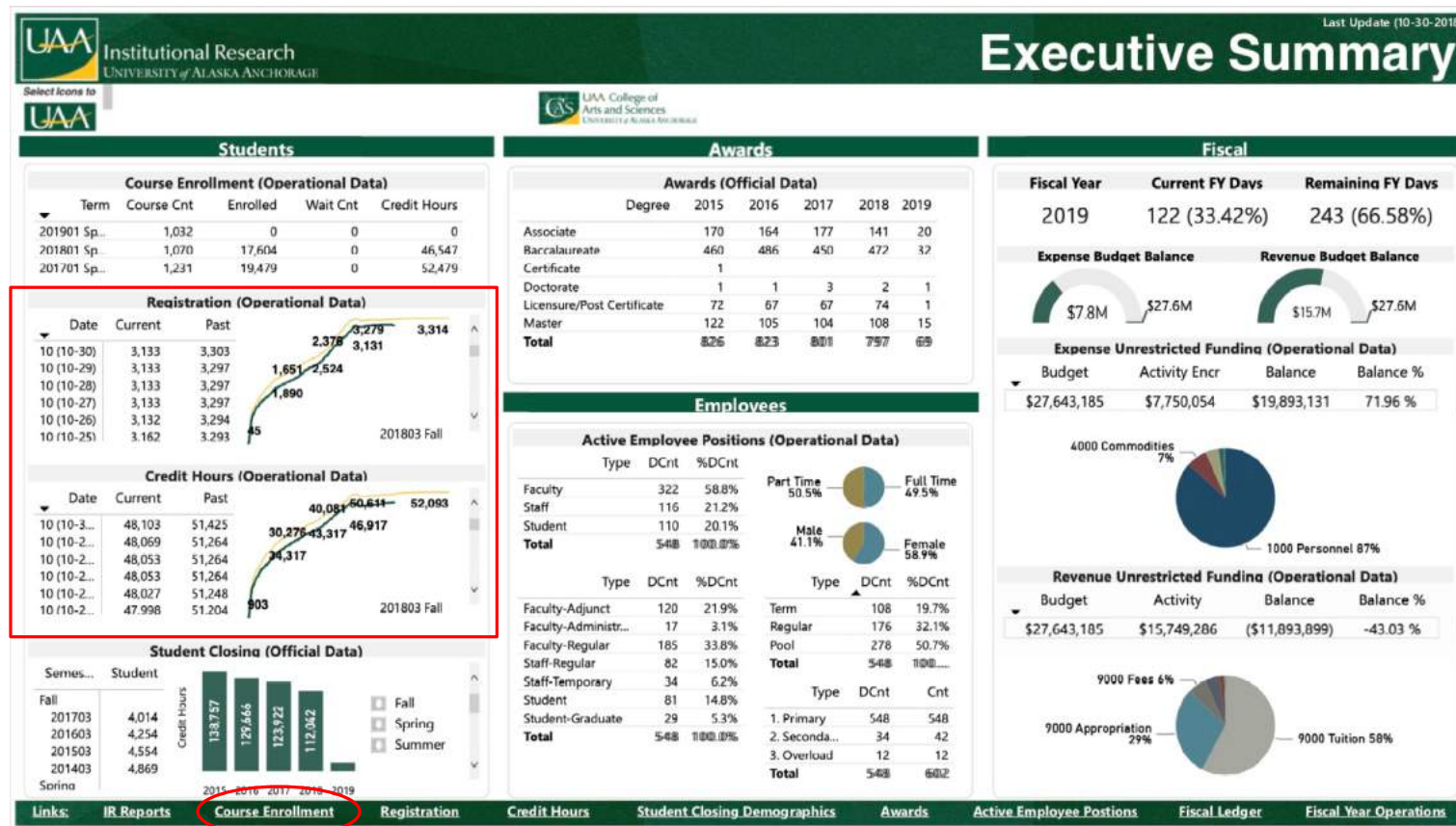
EAB Academic Performance Solutions

- Standardized Data Tables
- Standardized Dashboards
- Limited Customization with Filters
- Data Visualization
- Report Updating Once a Semester
- Benchmarking to Similar Institutions
- Customizable Benchmark Institutions

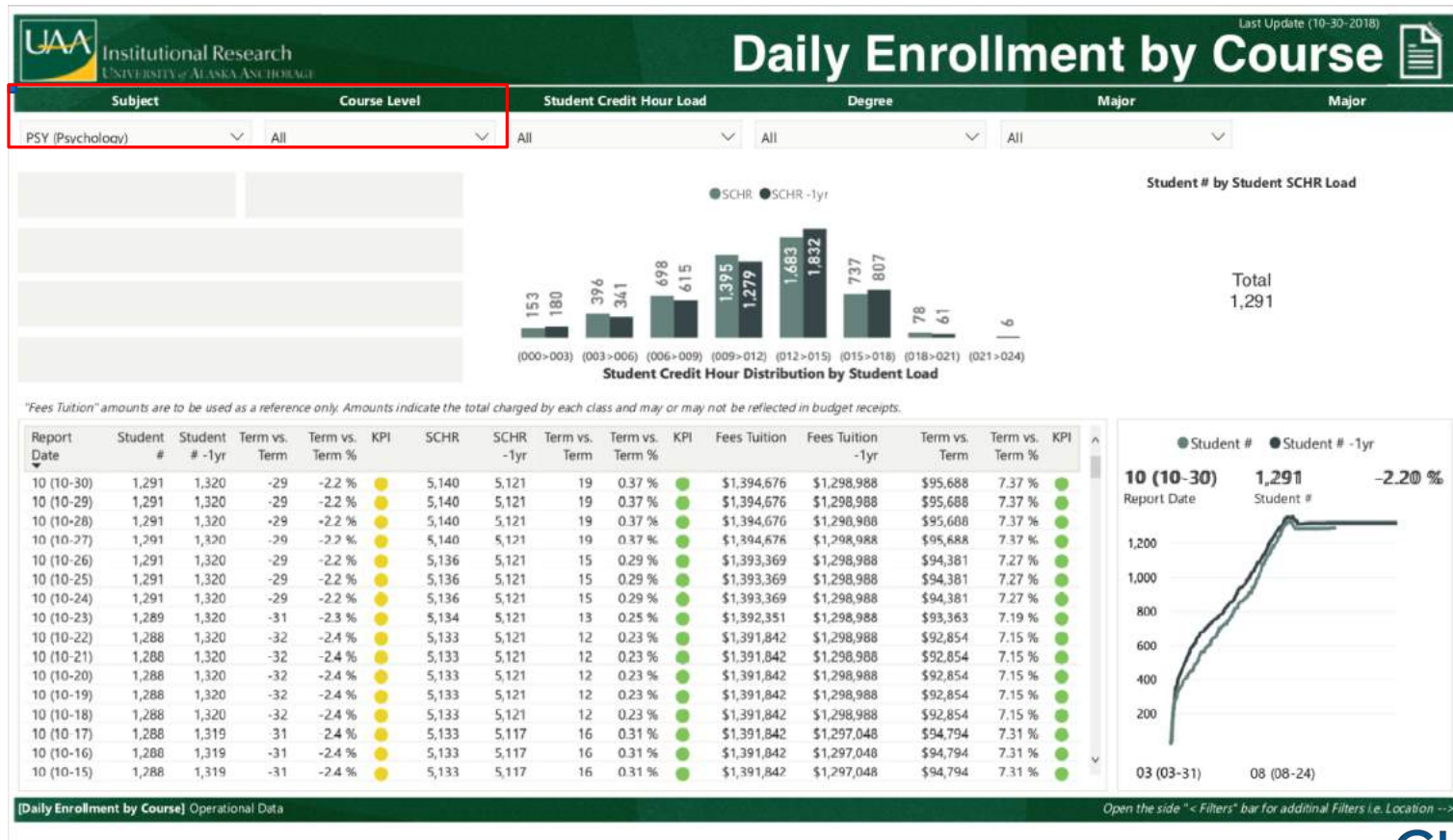
UAA-IR Sharepoint Executive Dashboard



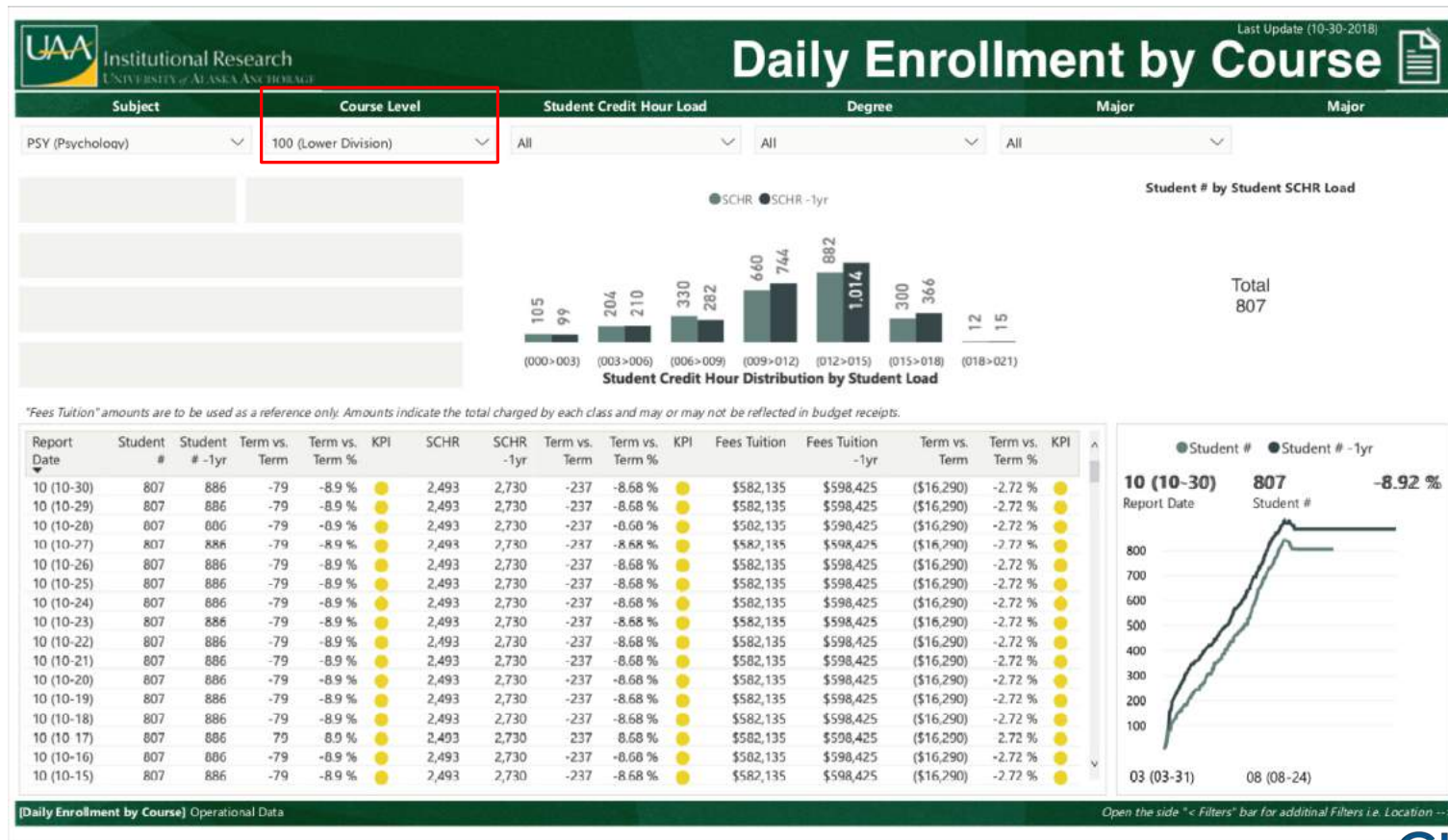
UAA-IR Sharepoint Executive Dashboard for CAS



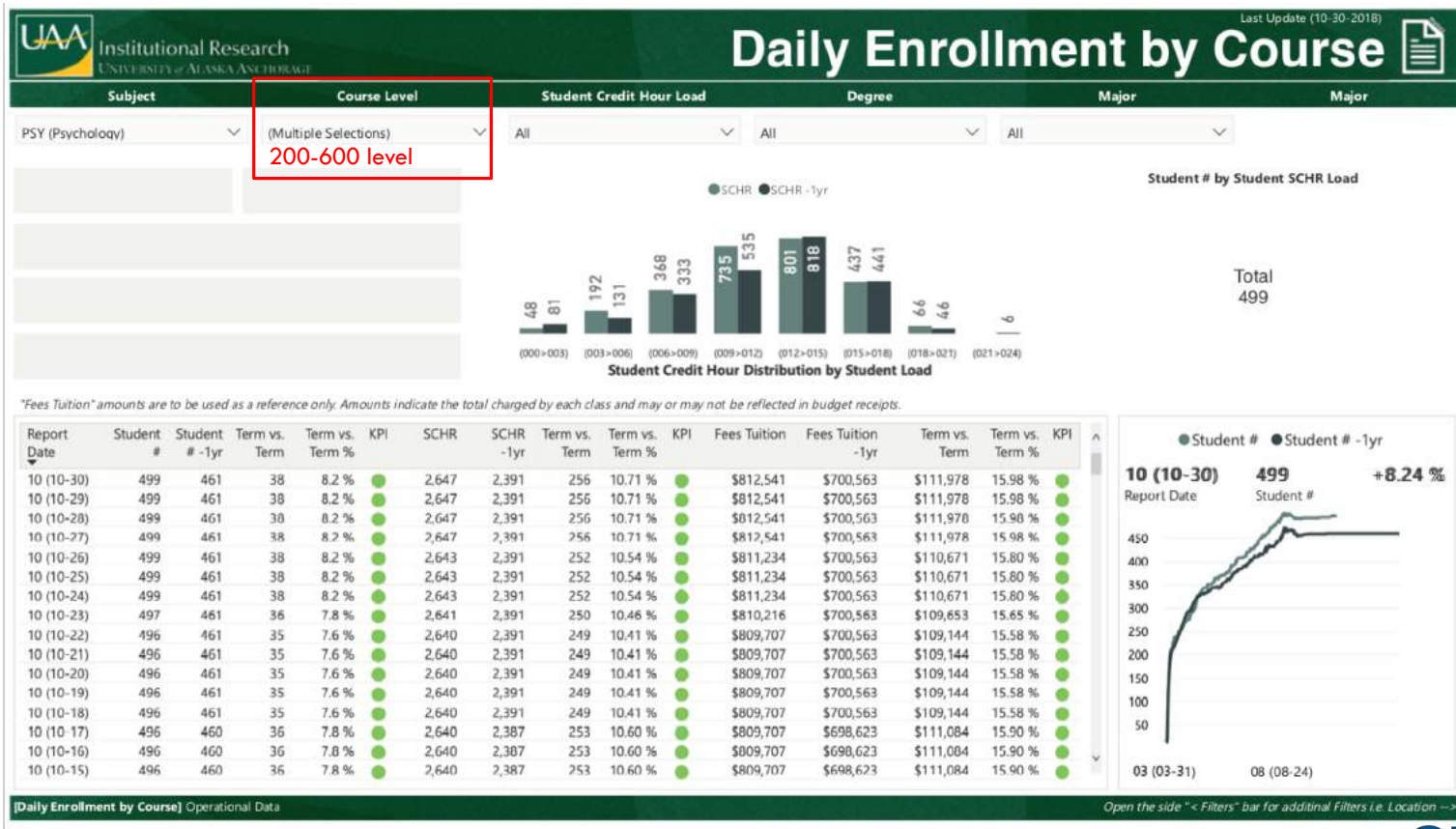
Course Enrollment for Psychology - All



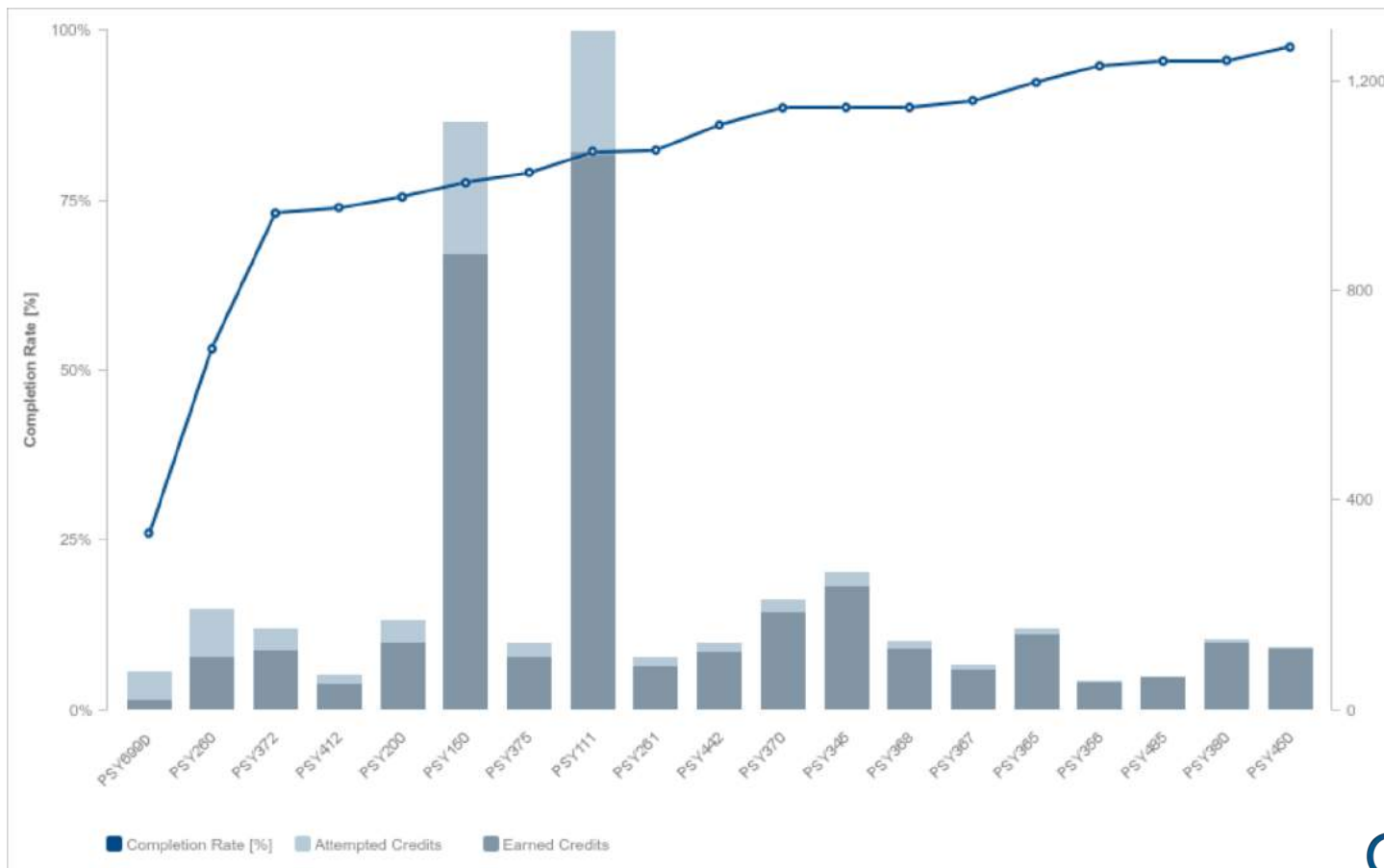
Course Enrollment for Psychology – 100 Level



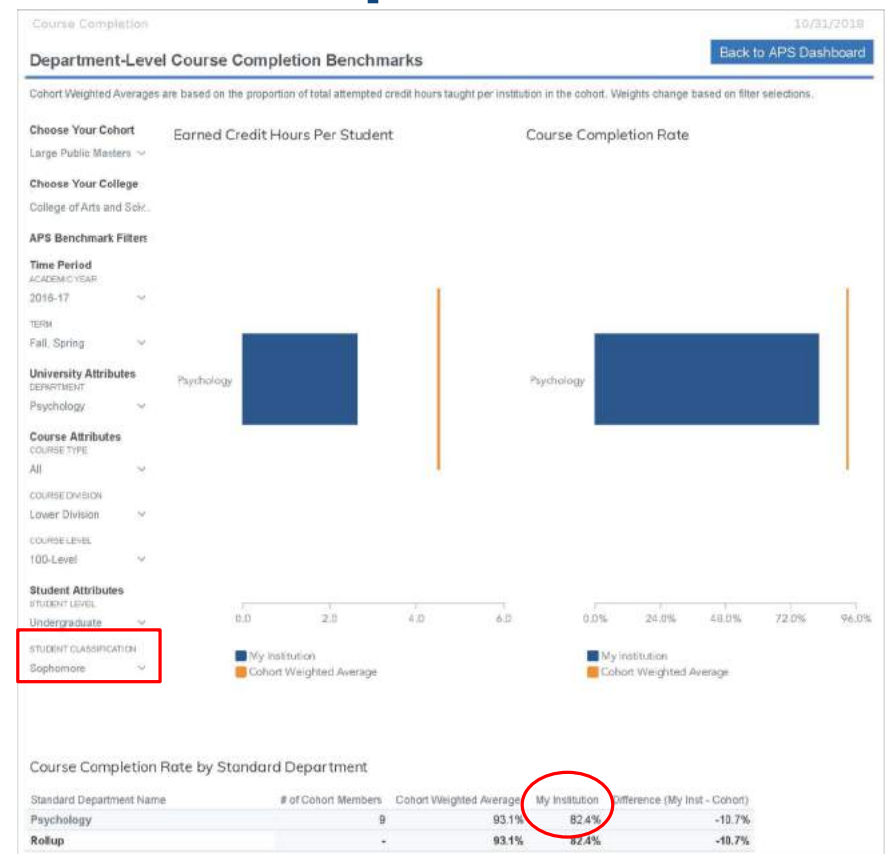
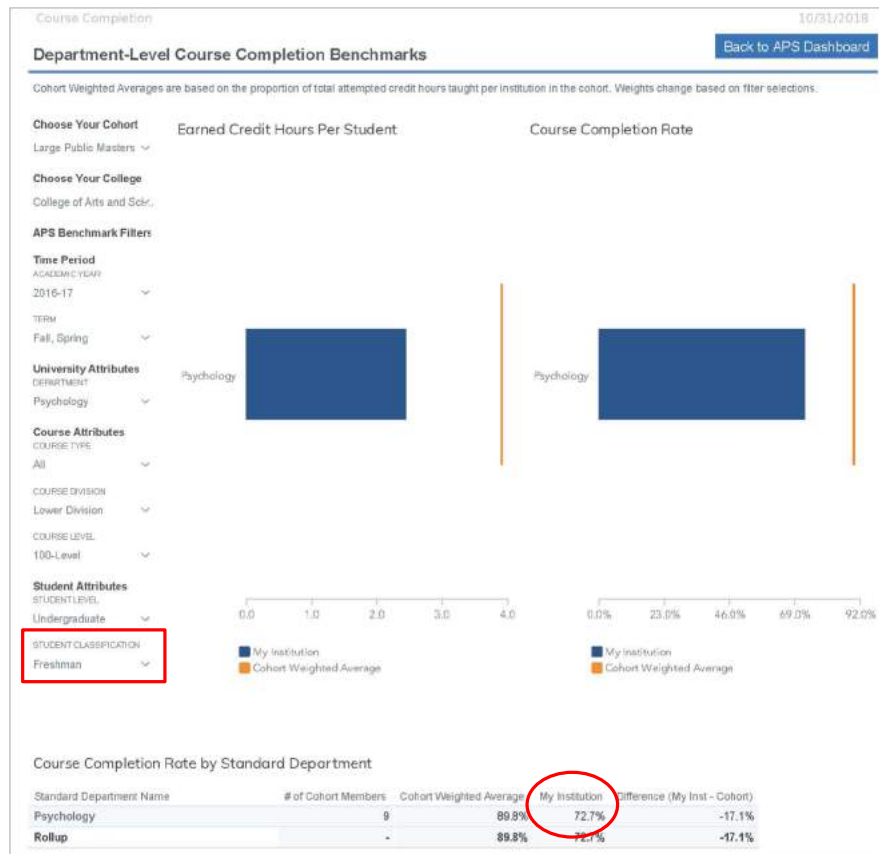
Course Enrollment for Psychology – Other Levels



APS – Course Completion Rates



APS – Benchmarked Course Completion Rates



Sophomores are ~10% more likely to complete the 100 level Psychology courses successfully.

KEY TAKEAWAYS

- Multiple data base management programs available
- Ability to customize allows units to focus questions
- Ability to benchmark can enrich understanding of the data



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HISTORIC CENSUS DATA

Comparison to the historic census data

Breakdown by Student Characteristics	FTES			HC			Unit Load		
	Census		Current	Census		Current	Census		Current
	Spring 2015	Spring 2016		Spring 2015	Spring 2016		Spring 2015	Spring 2016	
Grand Total	2,252	2,327	2,376	2,532	2,633	2,645	13.3	13.2	13.4
COSS	2,252	2,327	2,376	2,532	2,633	2,645	13.3	13.2	13.4

Note: Current data as of 2/7/2017

Term	Multiple values
Course College	All
Course Department	All
GE Area	All
Major College	COSS
Major Department	All
Select Breakdown Option	Major College

Course	Count of Enrolled Students			% Enroll. Capacity			Count of Sections		
	Census		Current	Census		Current	Census		Current
	Spring 2015	Spring 2016		Spring 2015	Spring 2016		Spring 2015	Spring 2016	
CRIM 2	135	129	110	100.0%	101.0%	97.9%	4	4	4
CRIM 10	47	49	46	97.3%	97.9%	99.3%	3	3	3
CRIM 20	191	169	152	99.6%	95.1%	99.5%	5	5	5
CRIM 50	192	176	246	98.0%	101.7%	100.8%	6	5	7
CRIM 100	232	247	231	97.5%	98.9%	100.0%	6	6	6
CRIM 101	18	11	28	97.8%	98.7%	98.6%	2	2	2
CRIM 102	135	148	136	98.6%	91.0%	100.7%	3	4	3
CRIM 108	35	52	51	90.0%	88.3%	83.9%	1	1	1
CRIM 109	131	123	144	93.1%	87.7%	100.7%	3	3	3
CRIM 110	45	46	46	97.9%	102.1%	100.0%	1	1	1
CRIM 112	192	190	191	88.9%	99.5%	100.0%	5	4	4
CRIM 113	139	162	142	100.0%	98.8%	101.4%	3	4	3
CRIM 114	48	38	44	98.1%	97.7%	109.3%	1	1	1
CRIM 117	238	240	187	89.0%	95.0%	101.5%	7	6	4
CRIM 118	49	54	48	100.0%	108.0%	102.1%	1	1	1
CRIM 119	38	48	44	87.0%	100.0%	97.9%	1	1	1
CRIM 120	148	150	166	99.3%	99.3%	99.3%	9	9	10
CRIM 126	18	14	16	95.2%	85.7%	95.2%	1	1	1
CRIM 127	182	192	204	98.4%	102.0%	98.2%	4	4	5
CRIM 131	35	37	37	90.0%	95.0%	97.5%	1	1	1
CRIM 133	44	44	45	102.3%	102.3%	107.0%	1	1	1
CRIM 134	87	90	84	99.0%	98.0%	100.0%	2	2	2
CRIM 135	43	44	46	102.3%	104.7%	107.0%	1	1	1
CRIM 136T	12	11	9	37.0%	39.6%	47.9%	1	1	1
CRIM 140	75	70	73	98.9%	101.0%	102.0%	2	2	2
CRIM 141	69	77	75	94.0%	100.0%	101.0%	2	2	2
CRIM 153	166	136	165	98.6%	98.4%	100.4%	8	9	11
CRIM 154	88	89	80	96.0%	98.0%	101.1%	2	2	2
CRIM 155	42	39	46	87.9%	97.9%	106.5%	1	1	1
CRIM 160H	25	18	11	69.4%	41.9%	27.9%	1	1	1
CRIM 160T			22			93.3%			1
CRIM 170	282	238	315	89.5%	88.4%	99.4%	8	6	7
CRIM 173	18	40	43	37.5%	100.0%	100.0%	1	1	1
CRIM 174	128	125	139	94.1%	98.6%	105.1%	3	3	3
CRIM 175	72	78	88	96.9%	102.1%	102.1%	2	2	2

COURSE HISTORY

Comparison to the historic census data									
Breakdown by Student Characteristics	FTEs			HC			Unit Load		
	Census		Current	Census		Current	Census		Current
	Spring 2015	Spring 2016		Spring 2015	Spring 2016		Spring 2015	Spring 2016	
Grand Total	2,252	2,327	2,376	2,532	2,633	2,645	13.3	13.2	13.4
COSS	2,252	2,327	2,376	2,532	2,633	2,645	13.3	13.2	13.4
Note: Current data as of 2/7/2017									
Course	Count of Enrolled Students			% Enroll. Capacity			Count of Sections		
	Census		Current	Census		Current	Census		Current
	Spring 2015	Spring 2016		Spring 2015	Spring 2016		Spring 2015	Spring 2016	
CRIM 2	135	129	110	100.0%	101.0%	97.9%	4	4	4
CRIM 10	47	49	46	97.3%	97.9%	99.3%	3	3	3
CRIM 20	191	169	152	99.6%	95.1%	99.5%	5	5	5
CRIM 50	192	176	246	98.0%	101.7%	100.8%	6	6	7
CRIM 100	232	247	231	97.5%	98.9%	100.0%	6	6	6
CRIM 101	18	11	23	97.9%	96.7%	98.6%	3	2	3
CRIM 102	135	148	136	98.6%	91.0%	100.7%	3	4	3
CRIM 108	35	52	51	90.0%	88.3%	83.9%	1	1	1
CRIM 109	131	123	144	93.1%	87.7%	100.7%	3	3	3
CRIM 110	45	46	46	97.9%	102.1%	100.0%	1	1	1
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CRIM 113	139	162	142	100.0%	98.8%	101.4%	3	4	3
CRIM 114	48	38	44	98.1%	97.7%	109.3%	1	1	1
CRIM 117	238	240	187	89.0%	95.0%	101.5%	7	6	4
CRIM 118	49	54	48	100.0%	108.0%	102.1%	1	1	1
CRIM 119	38	48	44	87.0%	100.0%	97.9%	1	1	1
CRIM 120	148	150	166	99.8%	99.3%	99.3%	9	9	10
CRIM 126	18	14	16	95.2%	85.7%	95.2%	1	1	1
CRIM 127	183	192	204	98.4%	102.0%	98.2%	4	4	5
CRIM 131	35	37	37	90.0%	95.0%	97.5%	1	1	1
CRIM 133	44	44	45	102.3%	102.3%	107.0%	1	1	1
CRIM 134	87	90	84	99.0%	98.0%	100.0%	2	2	2
CRIM 135	43	44	46	102.3%	104.7%	107.0%	1	1	1
CRIM 136T	12	11	9	37.0%	39.6%	47.9%	1	1	1
CRIM 140	75	70	73	98.9%	101.0%	102.0%	2	2	2
CRIM 141	69	77	75	94.0%	100.0%	101.0%	2	2	2
CRIM 153	166	136	165	98.6%	98.4%	100.4%	8	9	11
CRIM 154	88	89	80	96.0%	98.0%	101.1%	2	2	2
CRIM 155	42	39	46	97.9%	97.9%	106.5%	1	1	1
CRIM 160H	25	18	11	69.4%	41.9%	27.9%	1	1	1
CRIM 160T			22			93.3%			
CRIM 170	282	238	315	89.5%	88.4%	99.4%	8	6	7
CRIM 173	18	40	43	37.5%	100.0%	100.0%	1	1	1
CRIM 174	128	125	128	94.1%	98.6%	105.1%	3	3	3
CRIM 175	72	78	88	96.9%	102.1%	102.1%	2	2	2

Term

Multiple values

Course College

All

Course Department

All

GE Area

All

Major College

COSS

Major Department

All

Select Breakdown Option

Major College

- Click on any number and a list of students will be generated with the student's ID, name, preferred e-mail, and phone number.
- Students can be contacted for advising purposes.

GRADE DISTRIBUTION BY COURSE

		A	B	C	D	F	WU	I	W	CR	NC	RP
1	Fall 2016							11.60%	0.40%	83.90%	4.00%	
2	Fall 2016	21.40%	43.10%	19.10%	7.70%	6.70%	1.70%		0.30%			
10	Fall 2016	23.60%	32.70%	26.40%	7.30%	10.00%						
20	Fall 2016	17.00%	42.10%	25.50%	10.00%	5.20%			0.40%			
50	Fall 2016	28.70%	39.80%	20.40%	2.80%	7.20%			1.10%			
100	Fall 2016	23.70%	42.70%	22.30%	6.00%	4.70%			0.70%			
101	Fall 2016	13.70%	39.70%	36.60%	5.30%	4.60%						
102	Fall 2016	23.20%	41.10%	28.60%	3.20%	3.20%		0.50%				
109	Fall 2016	30.80%	39.60%	21.30%	3.80%	3.80%	0.40%	0.40%				
112	Fall 2016	28.30%	42.80%	18.40%	4.60%	5.90%						
117	Fall 2016	48.30%	16.80%	27.50%	5.40%	2.00%						
120	Fall 2016	42.60%	37.40%	13.10%	1.90%	3.90%	0.60%			0.40%		
127	Fall 2016	25.20%	41.40%	27.00%	2.70%	3.60%						
153	Fall 2016	33.80%	30.40%	17.90%	7.80%	8.90%		0.20%	0.40%	0.60%		
154	Fall 2016	27.10%	43.80%	22.90%	2.10%	4.20%						
155	Fall 2016	20.80%	22.90%	22.90%	27.10%	4.20%	2.10%					

- Click on any course and grade distribution will display of passing and non-passing grades by student level.
- Data can be used for course scheduling and advising purposes.
- Data are available on student demographics.

AGGREGATE DATA GRADE DISTRIBUTION

	Fail Rate (D, F, WU, NC)	GPA	Pass Rate (C or Higher)	N
1	4.60%		95.40%	224
2	16.10%	2.62	83.90%	299
10	17.30%	2.53	82.70%	110
20	15.20%	2.56	84.80%	271
50	10.10%	2.81	89.90%	181
100	10.70%	2.75	89.30%	300
101	9.90%	2.53	90.10%	131
102	6.50%	2.78	93.50%	185
109	7.90%	2.9	92.10%	240
112	10.50%	2.83	89.50%	152
117	7.40%	3.04	92.60%	149
120	6.50%	3.12	93.50%	465
127	6.30%	2.82	93.70%	111
153	16.80%	2.73	83.20%	497
154	6.30%	2.88	93.80%	48
155	33.30%	2.25	66.70%	48

- Click on any course and grade distribution will display of passing and non-passing grades by student level.
- Data can be used for course scheduling and advising purposes.
- Data are available on student demographics.

AT-RISK STUDENTS (FIRST GEN AND PELL)

Cohort	Year/Term	Student ID	Name	E-mail	Starting Major	Ending Major	Fall 2016 Cum GPA	Fall 2016 Cum Units
Fall 2011	Year 6 Term 1				Undeclared UGRD	Sociology	1.82	56
Fall 2011	Year 6 Term 1				Liberal Studies-Blended Pgm	Sociology	1.82	87
Fall 2011	Year 6 Term 1				Social Work	Sociology	2.25	98
Fall 2011	Year 6 Term 1				* Pre-Physical Therapy	Sociology	2.33	114
Fall 2011	Year 6 Term 1				Comm Disorders - Deaf Educatin	Sociology	2.57	113
Fall 2011	Year 6 Term 1				Theatre Arts - Acting	Sociology	2.52	115
Fall 2011	Year 6 Term 1				Pre-Psychology	Sociology	2.6	115
Fall 2011	Year 6 Term 1				Undeclared UGRD	Sociology	2.93	113
Fall 2011	Year 6 Term 1				Child Development	Sociology	2.29	124

STATUS TOWARD GRADUATING IN 4-6 YEARS (0-49%)

Acad Plan Descr	Cum. Gpa	Cum. Units	Day of MaxRunDate	Degree Status	Email	Emplid	Prob of 4yr Graduation	Prob of 6yr Graduation	Student Name	Term Units	Indicator of 6yr Graduation	Indicator of 4yr Graduation
History	1	6	8-Feb-17				0 to 24%	0 to 24%		14	1	1
History	2	9	8-Feb-17				0 to 24%	25 to 49%		12	1	1
History	2	9	8-Feb-17				0 to 24%	25 to 49%		14	1	1
History	2.05	65	8-Feb-17				0 to 24%	25 to 49%		12	1	1
History	2.08	27	8-Feb-17				0 to 24%	25 to 49%		9	1	1
History	2.1	44	8-Feb-17				0 to 24%	25 to 49%		12	1	1
History	2.31	16	8-Feb-17				0 to 24%	25 to 49%		13	1	1
History	2.36	56	8-Feb-17				0 to 24%	25 to 49%		9	1	1
History	2.37	67	8-Feb-17				0 to 24%	0 to 24%		12	1	1
History	2.37	79	8-Feb-17				Unknown	25 to 49%		12	1	1
History	2.43	17	8-Feb-17				0 to 24%	25 to 49%		15	1	1
History	2.49	85	8-Feb-17				0 to 24%	0 to 24%		6	1	1
History	2.63	27	8-Feb-17				0 to 24%	0 to 24%		14	1	1
History	2.88	68	8-Feb-17				Unknown	25 to 49%		12	1	1
History	3.02	98	8-Feb-17				75% or more			15	1	1

STATUS TOWARD GRADUATING IN 4-6 YEARS (50+%)

Acad Plan Descr	Cum. Gpa	Cum. Units	Day of MaxRunDate	Degree Status	Email	Emplid	Prob of 4yr Graduation	Prob of 6yr Graduation	Student Name	Term Units	Indicator of 6yr Graduation	Indicator of 4yr Graduation
Crim-Law Enforcement	2.08	98	8-Feb-17				50 to 74%	75% or more		12	1	1
Crim-Law Enforcement	2.11	91	8-Feb-17				50 to 74%	75% or more		15	1	1
Crim-Law Enforcement	2.89	108	8-Feb-17	Denied			0 to 24%	75% or more		6	1	1
Crim-Law Enforcement	2.92	118	8-Feb-17	In Review			0 to 24%	75% or more		12	1	1
Crim-Law Enforcement	3.1	137	8-Feb-17	Pending			0 to 24%	75% or more		14	1	1
Crim-Law Enforcement	3.31	104	8-Feb-17	Applied			0 to 24%	75% or more		21	1	1

KEY TAKEAWAYS

- Data driven decision making to inform policy, practice, assessment
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PRESENTERS

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THANK YOU

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