

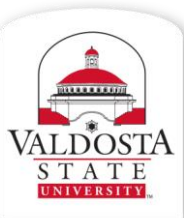


Actionable Intelligence: Big Data for Student Success

Brian A. Haugabrook, Valdosta State University
Barrie D. Fitzgerald, Valdosta State University

Strategic Goals

1. Strategic business intelligence for Complete College Georgia
2. Improve student success with predictive analytics
3. Proactive intervention and early alerts
4. Improve faculty and support staff communications
5. Leverage innovations in technology that can be applied to any institution



Davenport/Harris Framework Adopted for Higher Education

EDUCAUSE | *Building Organizational Capacity for Analytics*
Donald M. Norris and Linda L. Baer.
February 2013

Optimization

What's the best that can happen?

Predictive Modeling

What will happen next?

Forecasting / Extrapolation

What if these trends continue?

Statistical Analysis

Why is it happening?

Alert

What actions are needed?

Query / Drill Down

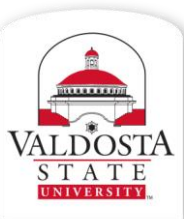
Where exactly is the problem?

Ad Hoc Reports

How Many, How Often, Where?

Standard Reports

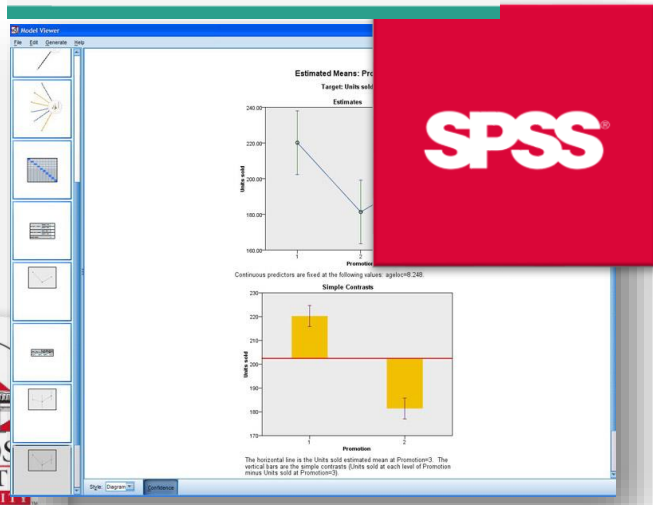
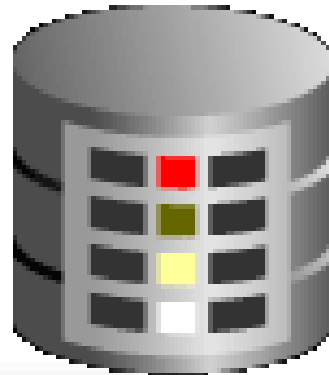
What Happened?



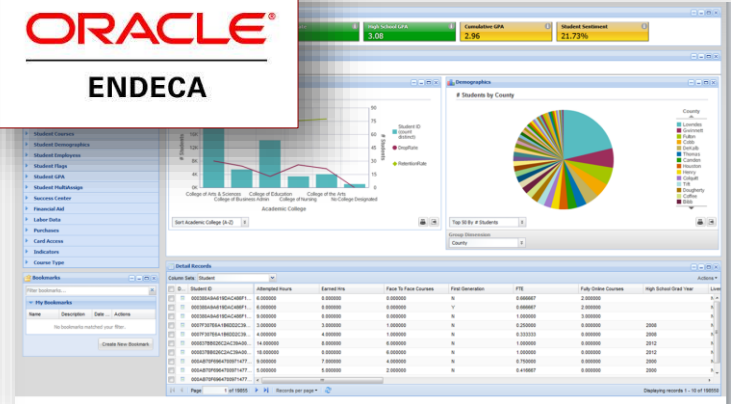
Valdosta State Current Business Intelligence Architecture

Custom Data Warehouse

ORACLE Application Express



ORACLE
ENDECA



Oracle CRM On Demand
Get smarter. Get more productive.
Get the best value, period.

ORACLE
DATA INTEGRATOR

eloqua

ORACLE
PEOPLESOFT ENTERPRISE

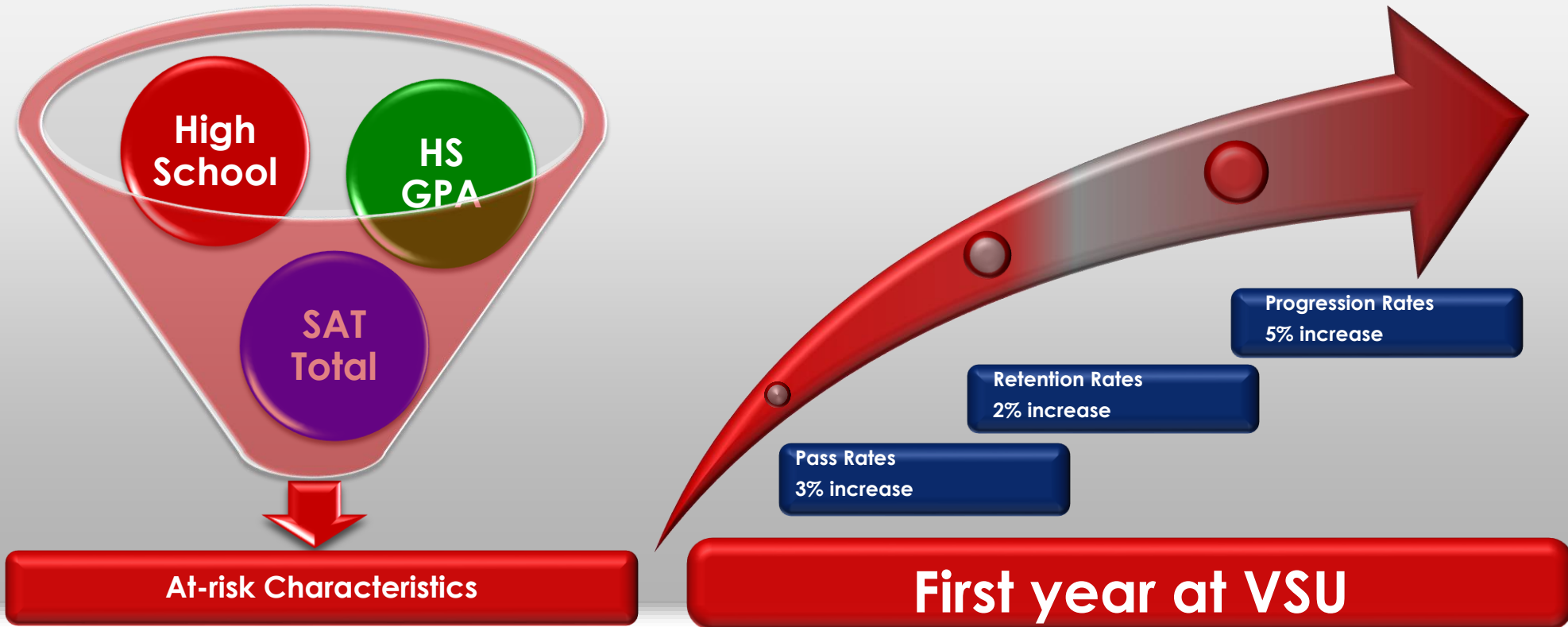


Student Success Leadership Team

- ▶ VP Enrollment Marketing Communications
- ▶ Chief Information Officer
- ▶ Interim Director of Institutional Research
- ▶ Registrar and Associate Registrar
- ▶ Directors of Centralized Advising/Online Learning
- ▶ Freshman Learning Community Coordinator
- ▶ Student Success Center Coordinator

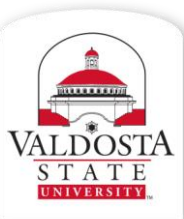


Valdosta State University: ROI First Year



Oracle OBIEE

- ▶ Improve information access for faculty and advisors
- ▶ Provide key reports and analysis
- ▶ Interactive class roster with photos and at-risk metrics
- ▶ Drag-n-Drop reporting
- ▶ Historical trends and patterns
- ▶ Oracle BI Cloud option



Gender Trends by College Department

Criteria **Results** Prompts Advanced

Subject Areas

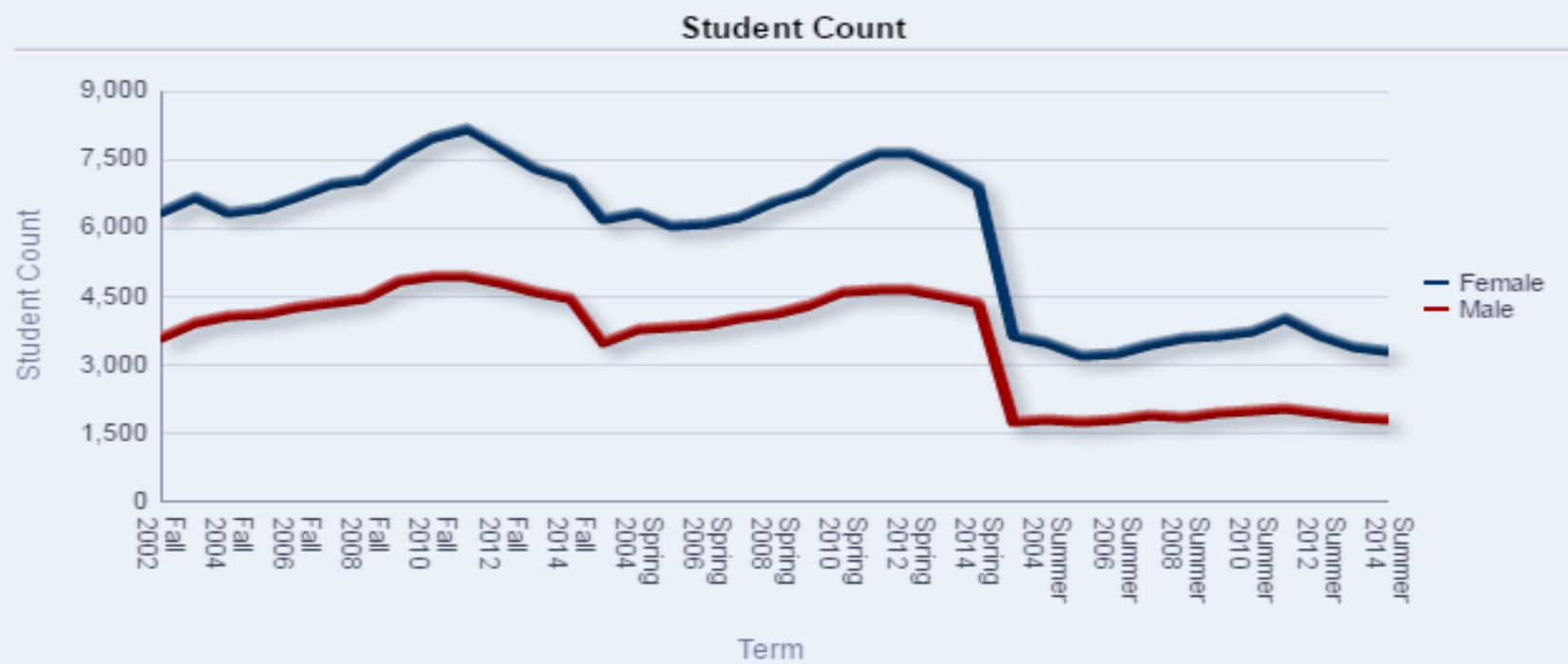
- Major Dimension
- Minor
- Concentration
 - Aid Eligible
 - CIPC Code
 - Concentration Code
 - Concentration
 - Concentration Dimension
- Gender
 - Gender Code
 - Gender
 - Gender Dimension
- Race
 - Race Code
 - Race
 - Race Dimension
- Full-Time / Part-Time
- Student Level
- Student Class
- Student Type
 - Student Type Code
 - Student Type
 - Student Type Dimension
- Overall GPA Range
- Person
- Other E-mail



Compound Layout

Title
Gender Trends by College Department
Time run: 9/24/2014 11:28:53 AM

Graph (2)



Catalog

Untitled

Criteria Results Prompts Advanced

Subject Areas

- ATHLETE
- ATTEMPTED_HRS
- CITIZEN
- COLLEGE
- DEPARTMENT
- EARNED_HRS
- EARNED_HRS_SATISFAC
- EMAIL_OTHER
- EMAIL_VSU
- ETHNICITY
- FIRST_GENERATION
- FLC
- FNAME
- FTE
- FTFT_FRESHMAN
- FTFT_TERM
- FULL_CUMULATIVE_GPA
- FULL_TIME
- GENDER
- HOPE_RECEIVED
- HOUSING
- HS_CODE
- HS_DEGREE_TYPE
- HS_DEGREE_YEAR
- HS_GPA
- INSTITUTIONAL_TERM_C
- LNAME
- MAJOR
- MNAME

Catalog

List All

- My Folders
- Shared Folders

Compound Layout

Title

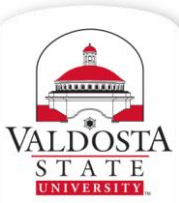
Graph

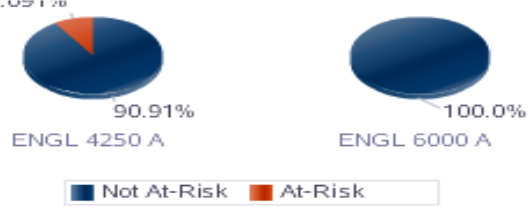
STUDENT_ID

DEPARTMENT	STUDENT_ID
Dept of Accounting/Finance	415
Dept of Management	360
Dept of Marketing/Economics	235
Undeclared Department	295

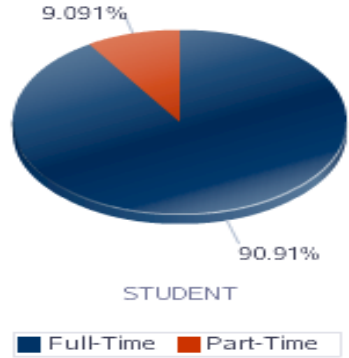
Pivot Table

TERM_DESC	COLLEGE	DEPARTMENT	MAJOR	
Fall 2012	College of Business Admin	Dept of Accounting/Finance	Accounting	176
			BA-Accounting	142
			BA-Finance	48
			Finance	49
		Dept of Management	BA-International Business	62
			BA-Management	174
			International Business	23
			Management	105
		Dept of Marketing/Economics	BA-Economics	26
			BA-Marketing	128
			Economics	16
		Undeclared Department	Marketing	65
			Business Administration	248
				Master Business Administration

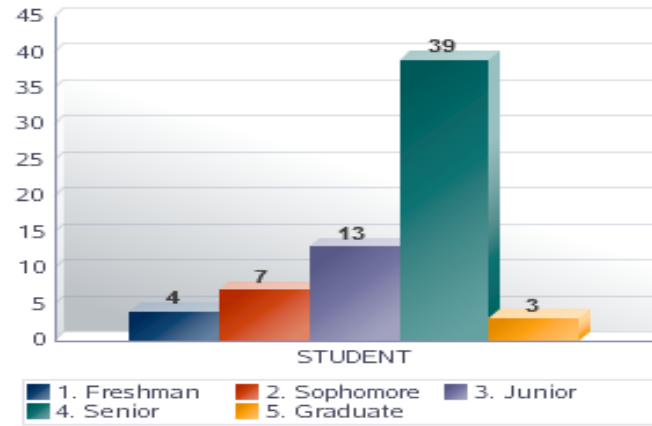




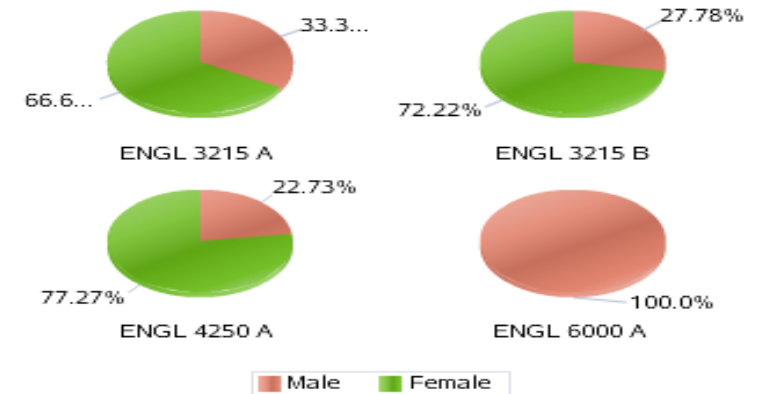
Time Status



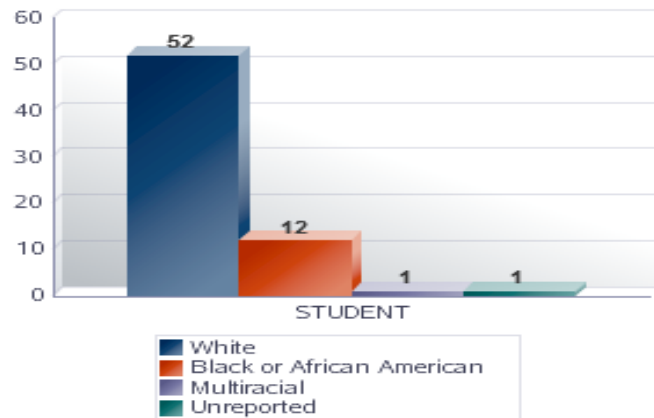
Student Classification



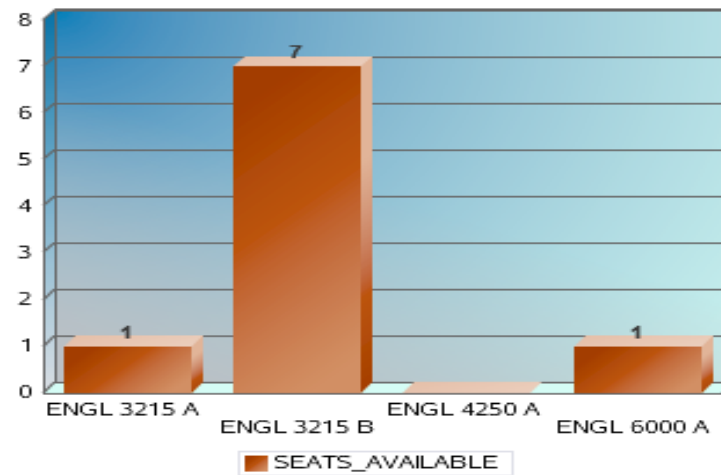
Gender



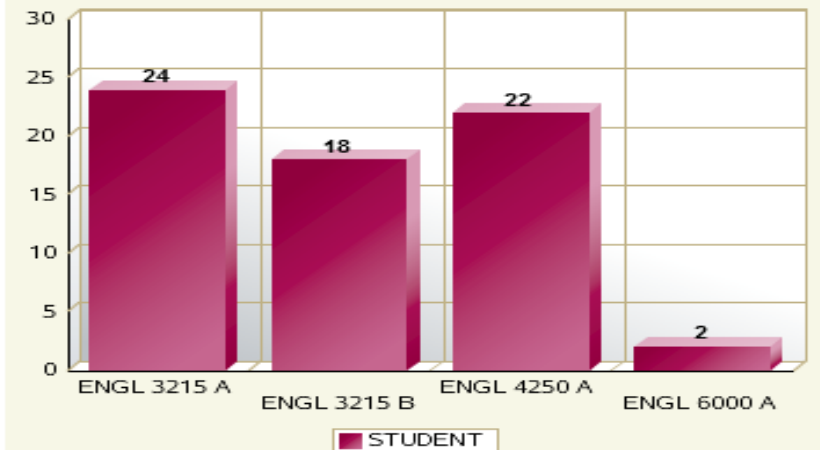
Race



Seats Available by Course



Seats Taken by Course





Academic Affairs Faculty Portal

[Main](#)[Advisor](#)[Courses](#)[At-Risk](#)[Data Warehouse Tools](#)[Applications/Portals](#)

Contact Brian Haugabrook, Director of Data Warehouse, for any questions. Email: bahauqab@valdosta.edu, Phone: (229) 333-7447
You can also email the VSU Data Warehouse department (VSUDataWarehouse@valdosta.edu) for requests, issues, or suggestions.

Digital Measures (College of Education)



[Login to Digital Measures](#)

Note: The Digital Measures link will expire 09/17/2012 at 09:32 AM.
If this link expires, Refresh the page to get the current link.

Watch a short video on using Digital Measures [here](#).

DegreeWorks



[Login to DegreeWorks](#)

DegreeWorks is an advising tool to aid in advising with electronic checklists, what-if scenarios, GPA calculators, advising planner, and notes.

For more information and tutorials click [here](#).

FLC Portal



[Login to the FLC Portal](#)

Freshmen Learning Communities advising and faculty portal. Access to course and student information that are part of an FLC community.

For more information click [here](#).

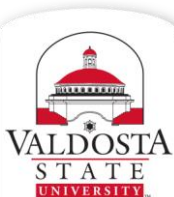
First-Time Full-Time Freshman Portal



[Login to the FTFT Portal](#)

Provides information on all enrolled students part of a FTFT cohort. Highlights students marked at-risk in general, reading and math based courses. This includes new FTFT students and enrolled FTFT students from previous years.

Department Specific Applications

[COE Advising Scheduler](#)[Nursing Advising Scheduler](#)[OASIS Advising Scheduler](#)[Student Success Center Scheduler](#)[Social Work Information System \(SWIS\)](#)

Interactive Course Summary

Course

Select Term

200

VSU Faculty Portal

1 - 200 of 2465

Term Desc	Crn	Subject	Crse Numb	Course Section	Course Title	Students Enrolled	Seats Available	Instructors Email
Fall 2012	00000	ACCT	2101	A	Principles of Accounting I	84	0	bahaugab@valdosta.edu
Fall 2012	00000	ACCT	2101	B	Principles of Accounting I	34	0	bahaugab@valdosta.edu
Fall 2012	00000	ACCT	2101	C	Principles of Accounting I	35	3	bahaugab@valdosta.edu
Fall 2012	00000	ACCT	2101	D	Principles of Accounting I	49	1	bahaugab@valdosta.edu
Fall 2012	00000	ACCT	2101	E	Principles of Accounting I	44	4	bahaugab@valdosta.edu
Fall 2012	00000	ACCT	2101	F	Principles of Accounting I	34	0	bahaugab@valdosta.edu
Fall 2012	00000	ACCT	2101	G	Principles of Accounting I	35	3	bahaugab@valdosta.edu
Fall 2012	00000	ACCT	2102	A	Principles of Accounting II	14	12	bahaugab@valdosta.edu
Fall 2012	00000	ACCT	2102	B	Principles of Accounting II	30	8	bahaugab@valdosta.edu
Fall 2012	00000	ACCT	2102	C	Principles of Accounting II	46	-1	bahaugab@valdosta.edu
Fall 2012	00000	ACCT	2102	D	Principles of Accounting II	43	2	bahaugab@valdosta.edu
Fall 2012	00000	ACCT	2102	E	Principles of Accounting II	36	-2	bahaugab@valdosta.edu
Fall 2012	00000	ACCT	3100	A	Intro to Fraud Examination	32	6	bahaugab@valdosta.edu

Class Roster that Highlights At-Risk Students




[Back to Course List](#)

Course ACCT 2101 A - Principles of Accounting I

Rows 100 [Go](#) [Settings](#)

At Risk General = 'Yes'
 At Risk Reading = 'Yes'
 At Risk Math = 'Yes'

1 - 84 of 84

Student Photo	Last Name	First Name	Middle Name	Attendance/Course Progress	Email	At Risk General	At Risk Math	At Risk Reading	DegreeWorks
	Doe	J	Tanner	Attendance/Course Progress Flags	bahaugab@valdosta.edu	Yes	Yes	No	DegreeWorks
	Doe	J	Jahkeem	Attendance/Course Progress Flags	bahaugab@valdosta.edu	No	No	No	DegreeWorks
	Doe	J	Qamar	Attendance/Course Progress Flags	bahaugab@valdosta.edu	No	No	No	DegreeWorks

VSU Faculty Portal

Automatic Alerts, Triggers, and Events (VSU Faculty Portal)

- ▶ Sends notification to the student's advisor and academic success center
- ▶ If the student lives on campus, a wellness check is automatically triggered through the housing office
- ▶ If the student is in an FLC, all other instructors are notified

[Return To List](#)

Edit Student Attendance

Course ACCT 2101 - Principles of Accounting I
Edit Name Jane Doe
Edit Status
Comments
Level 1: 1-2 Absences, No-Risk
Level 2: Multiple Absences, At-Risk
Level 3: Failing due to Absences
0 of 2000

[Update Attendance](#)

ATTENDANCE

Attendance in good standing

Edit Course Progress

Course ACCT 2101 - Principles of Accounting I
Edit Name Jane Doe
Course Status
Comments
0 of 2000


[Update Progress](#)

PROGRESS

Course progress in good standing

Student Progress in all Courses

Student

STUDENT_PHOTO	STUDENT_NAME	EMAIL_VSU	FULL_CUMULATIVE_GPA	ADVISOR_NAME	ADVISOR_EMAIL
	John Doe	bahauqab@valdosta.edu	-	Robert Smith	bahauqab@valdosta.edu

1 - 1

[Return To List](#)

Student Schedule

CRN	Course	Instructor Email	Attendance Status	Attendance Comments
80354	ENGL 1101 T - Composition I	ido@valdosta.edu	Level 2: Multiple Absences. At-Risk	Marlee has accrued three absences. We are in the process of setting up a meeting to discuss the matter.
80042	KSPE 1020 C - Weight Training	ido@valdosta.edu		
80643	VSU 1101 K - Keys to College Success	ido@valdosta.edu		
81056	PHIL 2010 B - Fundamentals of Philosophy	ido@valdosta.edu		
81213	HIST 2112 K - United States History Sn 1865	ido@valdosta.edu		



Custom Application Integrations

VALDOSTA STATE UNIVERSITY

Back to Self-Service | Course Attributes | Help | Print

Find Student ID: Name: Degree: Major: Level: Classification: Last Audit: Last Refresh:

Worksheets | Planner | Notes | Petitions | Exceptions | GPA Calc | Admin

Worksheets > Format: Student View | View | Process New | [Class History](#)

History | **Degreeworks Production Environment**

Student View AB171111 as of 08/20/2012 at 11:49

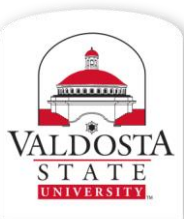
Student	Haugabrook, Brian Antonio	Level	Graduate-Semester
ID		Degree	Master of Public Admin
Classification	Graduate	College	College of Arts & Sciences
Catalog	Fall 2006	Major	Public Administration
Advisor	Argyl	Minor	
F1FT Freshman		Prior Degrees	

Requirements | **Degree Progress** 100%

Athletic Eligibility

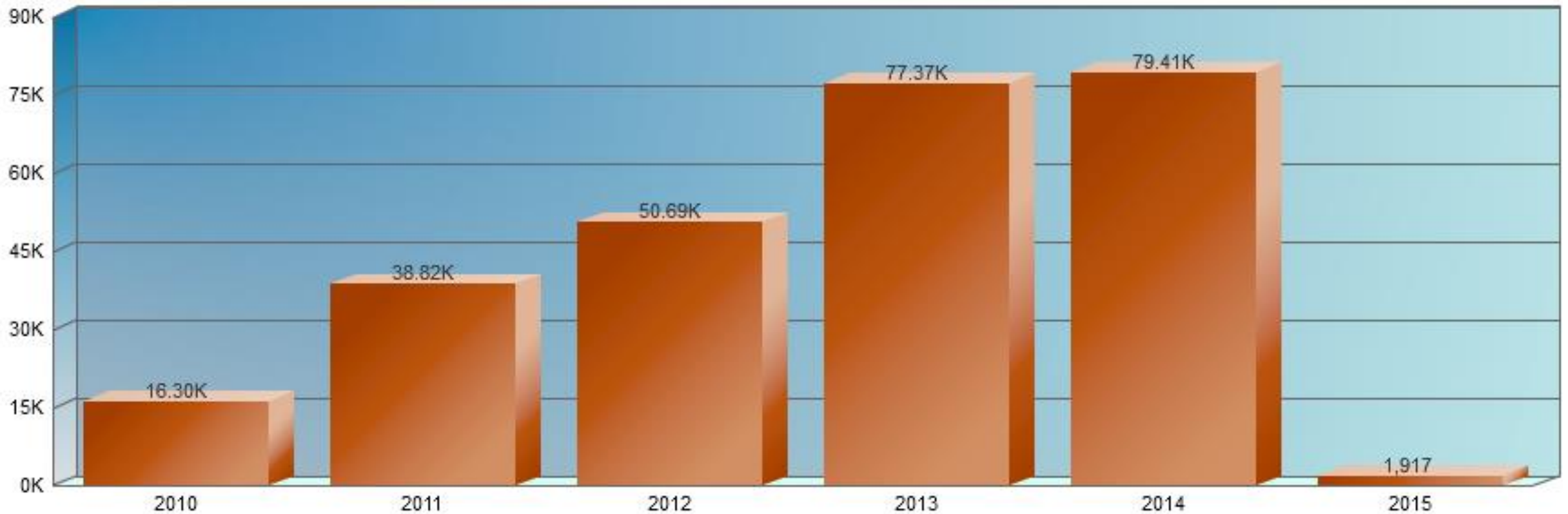
Athletic Eligibility History

- Current Holds Affecting Registration or Graduation
- You have no holds.
- Master of Public Administration
 - Classified as a Regular Graduate Student
 - You meet the minimum GPA requirement
 - Degree Requirements
- Major in Public Administration-MPA
 - Foundations Seminar in PA | PADM 7300 | Foundation in MPA
 - Quantitative Methods for PA | PADM 7060 | Quantitative Mthds for PADM
 - Policy Analysis | PADM 7090 | Policy Analysis



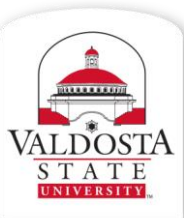
DegreeWorks Logins

Logins by Year



MyVSU Student Portal

- ▶ Data-driven portal based on student attributes
- ▶ Tailored advertisements promoting support services
- ▶ Advisor alerts to improve communication
- ▶ Single sign-on to email, D2L, Banner, library, and other services
- ▶ Integration with VSU data warehouse to deliver real-time prioritization to advertisements and messages





Math Tutoring
229.333.1500

- Math Study Tips
- Tutoring Schedule
- Course Catalog
- Choosing a Major



English Tutoring
229.333.1500

This would be text for a paragraph.
This would be text for a paragraph.
This would be text for a paragraph.

Logout

	VSU E-mail
	Banner Registration
	BlazeView
	Information Technology Service Desk
	Password Management

Registrar's Office



English Tutoring
229.333.1500

- English Study Tips
- Tutoring Schedule
- Course Catalog
- Choosing a Major

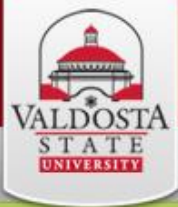
Fall Registration
July 8 @ 7am



This would be text for a paragraph.
This would be text for a paragraph.
This would be text for a paragraph.

MyVSU Portal

Information and advertisements tailored to each individual student in real-time



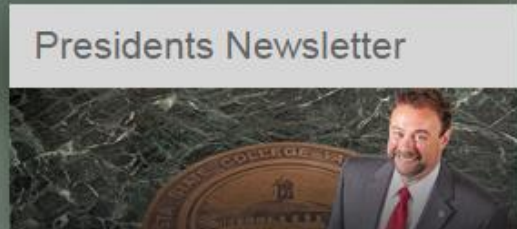
! You have a new message. [Click Here.](#)

[View Background](#) | [Inbox](#) | [Help](#) | [Logout](#)



Valdosta Forecast

TODAY	THU	FRI	SAT
66 88	66 87	65 88	65 82



- ### Links
- COLLEGE | UNIVERSITY
- Centralized Advising
 - Financial Aid
 - VSU Majors and Degrees
 - VSU Catalogs
 - Course Search
 - Student Success Center

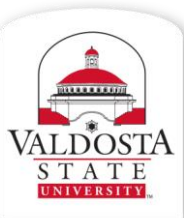


VSU Email S	BlazeVIEW D2L S
Banner Registration S	GoVIEW
Parking and Transportation	CampusConnect S
Orientation for Online Students S	1Card Online Card Office
Surviving & Thriving S	ADP/Shared Services



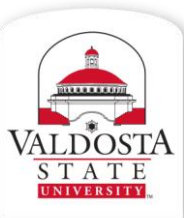
Oracle Advanced Analytics

- ▶ Identify key attributes to improve student success
- ▶ Create individual student success probability
- ▶ Provide real-time predictive analytics
- ▶ Data mining and full access to models
- ▶ Provide students with predicted course and program difficulty
- ▶ Compare predictions with historic patterns to ensure accuracy



Advantages of Advanced Analytics

- ▶ Models can operate in real-time against recent data
- ▶ Provide real-time predictive analytics, course grade predictions, and major matching
- ▶ Algorithms and models not only can operate against academic advising data but can provide analysis across all data sources (i.e. ADP, PeopleSoft Financials, D2L, Banner)



Analytics through R Programming

- ▶ R scripts to create quick analyses of data and to check the results of the model
- ▶ R assists in determining predictive analytics models
- ▶ R scripts can help produce quick turnaround times for cyclical projects
- ▶ R scripts can be embedded inside the data warehouse to run in real time



- ▶ Example of a Script:
- ▶ Question: Are there a group of students that have a higher likelihood of retaining the next fall, if so who?
- ▶ Accuracy: .7

```
6 ## Setting the seed to get the same results again and again
7 set.seed(2014)
8 ## imported necessary files
9 cohort <- read.table("./cohorts.txt", header = TRUE, sep = ",")
10 retained <- read.table("./cohorts_1yrlater.txt", header = TRUE, sep = ",")
11 retained$Count <- 1
12 cohort <- cohort[cohort$TERM >= 201108,]
13 ## created id links
14 retained$link <- paste(retained$STUDENT_ID, retained$FTFT_TERM, sep = ".")
15 retained <- retained[,5:4]
16 cohort$link <- paste(cohort$STUDENT_ID, cohort$TERM, sep = ".")
17 ## created a retained indicator
18 cohort <- merge(x = cohort, y = retained, by.x = "link", by.y = "link", all.x = TRUE)
19 rm(retained)
20 cohort$Count[is.na(cohort$Count)] <- 0
21
22 ## created a training data set
23 train <- cohort[sample(nrow(cohort), nrow(cohort)*.6),]
24 ## created a sample from the training set
25 sub.test <- train[sample(nrow(train), nrow(train)*.4),]
26 ## pulled out ids used in training set
27 train.ids <- as.data.frame(train$STUDENT_ID)
28 colnames(train.ids) <- "STUDENT_ID"
29 train.ids$Count_used <- 1
30 ## created test data
31 test <- merge(x = cohort, y = train.ids, by.x = "STUDENT_ID", by.y = "STUDENT_ID", all.x = TRUE)
32 test <- subset(test, is.na(test$Count_used),-8)
33 rm(train.ids)
34 colnames(train)[7] <- "Retained"
35 colnames(sub.test)[7] <- "Retained"
36 colnames(test)[7] <- "Retained"
37
38 ## All together model prediction
39 fit <- rpart(Retained ~ VSU_GPA, data = train, method = "class")
40 fancyRpartPlot(fit)
41 sub.test$Prediction <- predict(fit, sub.test, type = "class")
42 prop.table(table(sub.test$Prediction, sub.test$Retained))[1,1] +
43   prop.table(table(sub.test$Prediction, sub.test$Retained))[2,2]
44 ## accuracy on sub.test .746
45 test$Prediction <- predict(fit, test, type = "class")
46 prop.table(table(test$Prediction, test$Retained))[1,1] +
47   prop.table(table(test$Prediction, test$Retained))[2,2]
48 ## accuracy on test .761
```



Total Prediction

At-risk General (All)

Count	Column Labels <input type="button" value="v"/>		
Enrolled for Fall?	<input type="button" value="v"/> Predict Retain	Predict No Retain	Total
Enrolled	1071	60	1131
Not Enrolled	343	111	454
Total	1414	171	1585

Enrolled for Fall is as of 4/16/2015

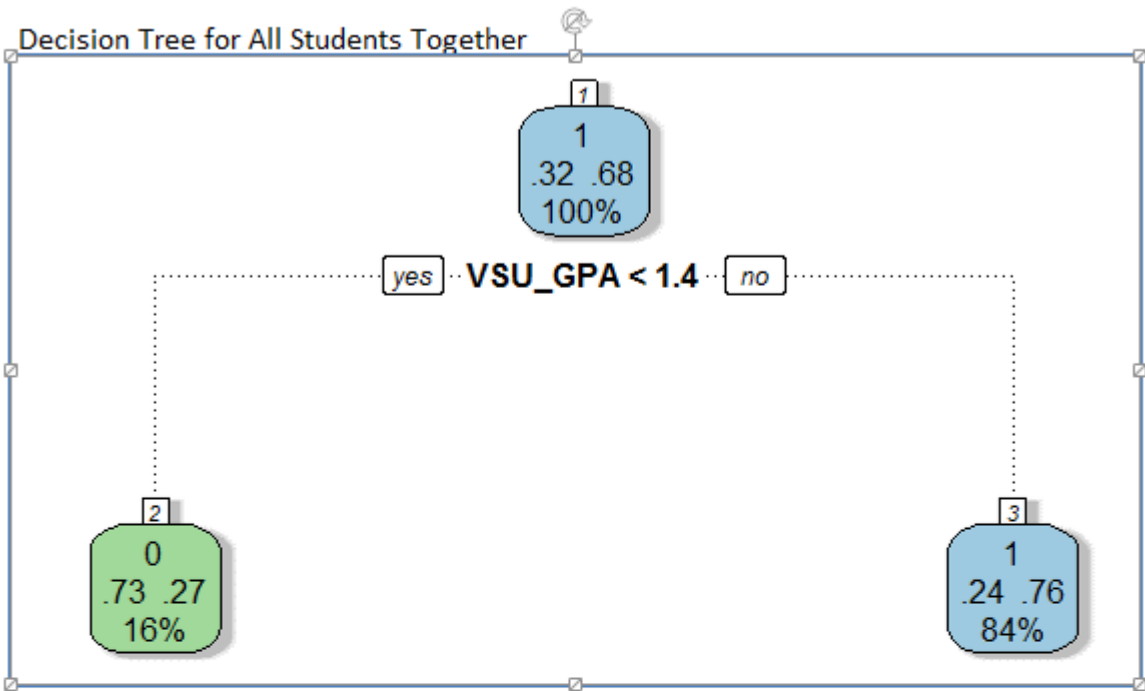
Stats on Predictive Model	
Model's Sensitivity	0.757
Model's Specificity	0.649
Postive Predictive Value	0.947
Negative Predictive Value	0.244
Model's Accuracy	0.746
Model's Inaccuracy	0.254

Enrollment based on Enrollment from Spring 2015

At-risk General (All)

Count	Column Labels <input type="button" value="v"/>		
Enrolled for Fall?	<input type="button" value="v"/> Predict Retain	Predict No Retain	Total
<input type="checkbox"/> Not Enrolled Spring	83	36	119
Enrolled Fall		1	1
Not Enrolled Fall	83	35	118
<input type="checkbox"/> Enrolled Spring	1331	135	1466
Enrolled Fall	1071	59	1130
Not Enrolled Fall	260	76	336
Total	1414	171	1585

Orange highlighted indicates the potential student pool to draw from to increase the retention rate.

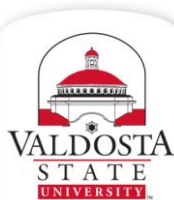


Model Accuracy Based on Sub Test and Test

Subtest	0.746
Test	0.761

To Move the Retention Needle

Percent Increase	Rate	Students Needed
0.00	0.714	0
0.01	0.724	16
0.02	0.734	32
0.03	0.744	48
0.04	0.754	63
0.05	0.764	79





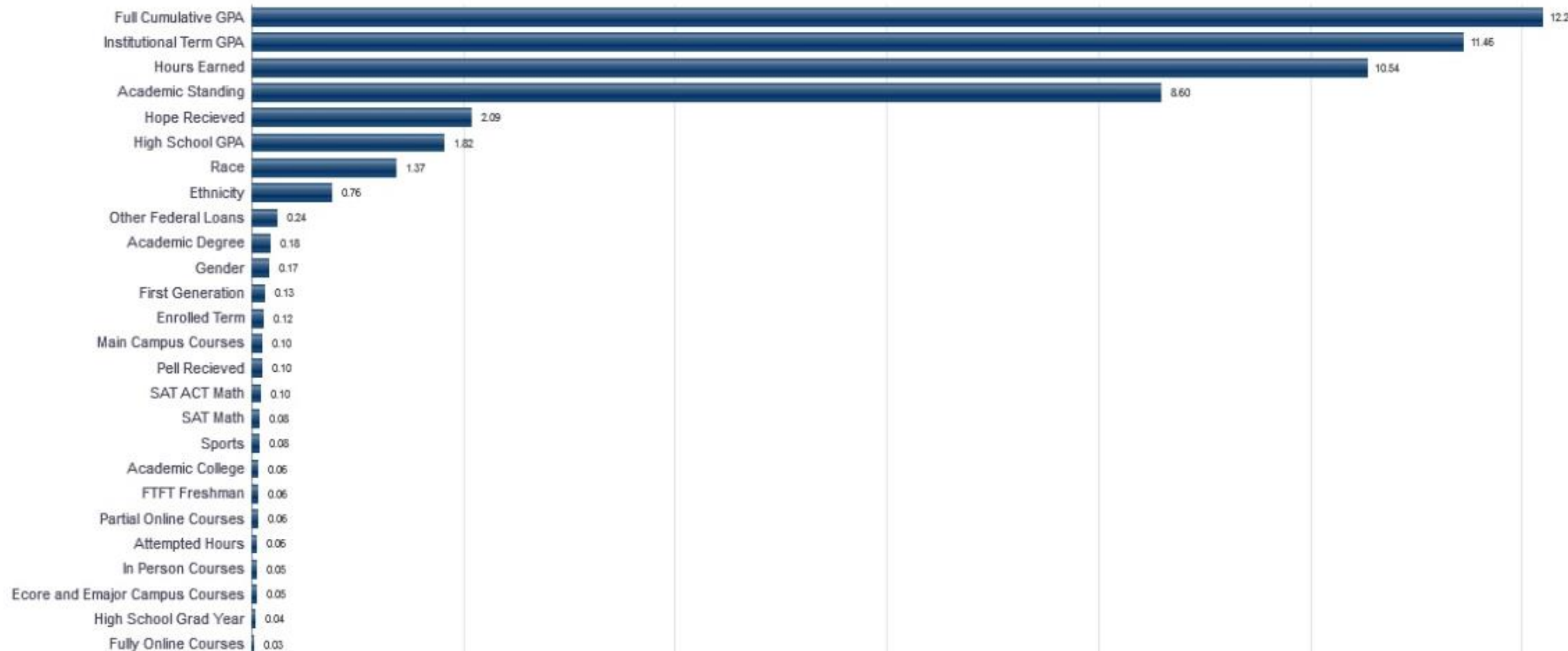
Student Attributes Ranked by Predictive Importance



Displays attributes included in AI model that contribute to student success

Time run: 8/13/2014 12:21:02 PM

Student Attributes Ranked by Predictive Importance



Get At-Risk Students Now
Please select attributes you would like to include in the advanced analytic model. This model will be dynamically run in the database using the latest table data. Please feel free to re-run this model multiple times with different attributes depending on your needs.

Enter a Term: Select Value(s)

- NULL
- ACT_COMPOSITE
- ACT_ENGLISH
- ACT_MATH
- ACT_READING
- ACT_SCIENCE
- HSGPA
- SATM
- SATT
- SATV

Dynamic Execution of the Decision Tree Function
Please select the attributes to include in the execution of the Decision Tree Function
Time run: 9/5/2014 10:37:00 AM

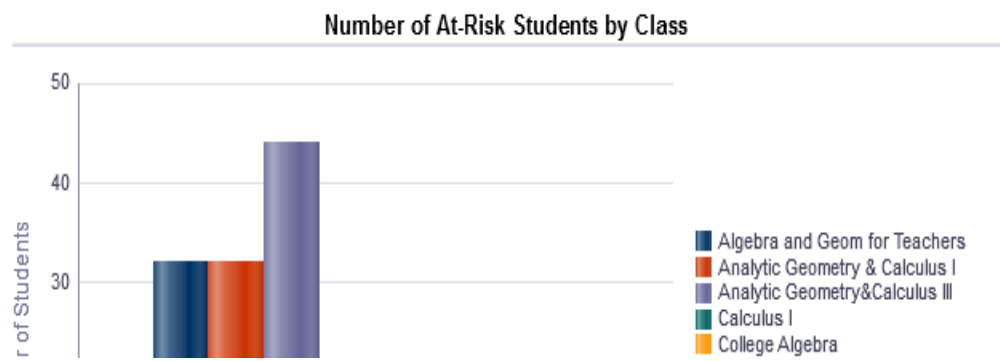
Values that are being evaluated in the database:
201108 --- @ {params}

```
The R function:
Invoked Successfully
```

Decision Tree Model that Determines At-Risk in Math
Displays rules that were generated from decision tree model to determine if a student is at risk
Time run: 9/5/2014 10:36:21 AM

Rule Number	Rule that Determines At-Risk
10	(SATM <= 2.5) AND (HSGPA in ("3"))
11	(SATM <= 2.5) AND (HSGPA in ("4"))
12	(HSGPA in ("3" "4")) AND (SATM > 2.5)
6	(HSGPA in ("1")) AND (SATM <= 2.5)
7	(HSGPA in ("1")) AND (SATM > 2.5)
8	(HSGPA in ("2")) AND (SATM <= 2.5)
9	(HSGPA in ("2")) AND (SATM > 2.5)

At-Risk Students by Course Name
Displays At-Risk Students by Course Name
Time run: 9/5/2014 10:31:44 AM



Please select a Student ID

Student ID VSU00037

Apply Reset

Current Courses

List of current courses with expected grades
Time run: 10/8/2014 2:14:52 AM

Student ID VSU00037

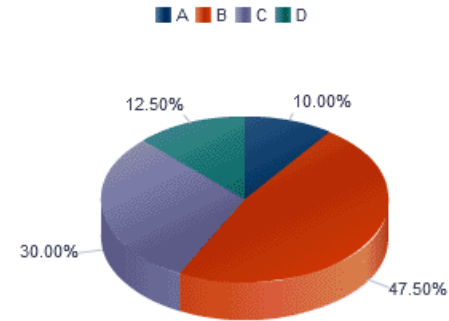
Term	Course number	Course title	Course department	Faculty email	Hours	Predicted Grade
Fall 2014	3401	Organic Chemistry I	Dept of Chemistry	jbyu	4	C
	3900	Tests and Measurements	Dept of Psychology/Counseling	jsrodefer	3	C
	4050	Psychology of Learning	Dept of Psychology/Counseling	blbrowne	3	C
	4800	Intr To Clinical Practices	Dept of Psychology/Counseling	dvasiele	3	C
Total Credit Hrs					13	

Analyze Edit Refresh Export

Grade Distribution for Student

Grade distribution for all terms for filtered Student ID
Time run: 10/8/2014 2:16:37 AM

Displays grade distribution for all terms for Student ID



Student Id Enrollment Term --Select Value-- Course Subject --Select Value-- Course Number --Select Value--

Apply Reset

Predicted Grades

Please input a Student ID, Course Subject and Course Number to see predicted grade
Time run: 10/8/2014 2:11:04 AM



Please select a Student ID

Student ID VSU00037

Apply Reset

Major Matching

Majors that are a good match for Student
Time run: 10/8/2014 2:22:43 AM

Academic college	Academic major	Prediction
College of Arts & Sciences	Associate of Arts	<input checked="" type="checkbox"/>
	Biology	<input checked="" type="checkbox"/>
	Chemistry	<input checked="" type="checkbox"/>
	Criminal Justice	<input checked="" type="checkbox"/>
	Criminal Justice - Online	<input checked="" type="checkbox"/>
	English	<input checked="" type="checkbox"/>
	Environmental Geosciences	<input checked="" type="checkbox"/>
	French	<input checked="" type="checkbox"/>
	General Studies Program	<input checked="" type="checkbox"/>
	History	<input checked="" type="checkbox"/>
	Interdisciplinary Studies	<input checked="" type="checkbox"/>
	Legal Assistant Studies	<input checked="" type="checkbox"/>
	Legal Assistant Studies-Online	<input checked="" type="checkbox"/>
	Mathematics	<input checked="" type="checkbox"/>
	Philosophy	<input checked="" type="checkbox"/>
	Philosophy & Religious Studies	<input checked="" type="checkbox"/>
	Political Science	<input checked="" type="checkbox"/>
	Sociology	<input checked="" type="checkbox"/>
	Sociology & Anthropology	<input checked="" type="checkbox"/>
	Spanish	<input checked="" type="checkbox"/>
	Technical Studies	<input checked="" type="checkbox"/>

Major Matching

Majors that are a match for the Student
Time run: 10/8/2014 2:19:26 AM

Academic college	Academic major	Prediction
College of Arts & Sciences	Engineering Studies (2 yr)	<input type="checkbox"/>
	Learning Support	<input type="checkbox"/>
	Undecided	<input type="checkbox"/>
College of Business Admin	Accounting	<input type="checkbox"/>
	BBA-Accounting	<input type="checkbox"/>
	BBA-Economics	<input type="checkbox"/>
	BBA-Finance	<input type="checkbox"/>
	BBA-Healthcare Administration	<input type="checkbox"/>
	BBA-International Business	<input type="checkbox"/>
	BBA-Management	<input type="checkbox"/>
	BBA-Marketing	<input type="checkbox"/>
	Business Administration	<input type="checkbox"/>
	Economics	<input type="checkbox"/>
	Finance	<input type="checkbox"/>
	International Business	<input type="checkbox"/>
	Management	<input type="checkbox"/>
	Marketing	<input type="checkbox"/>
College of Education	Athletic Training	<input type="checkbox"/>
	Vo Tech School - Health	<input type="checkbox"/>
College of Nursing & Health Sc	Athletic Training	<input type="checkbox"/>
	Pre-Athletic Training	<input type="checkbox"/>

Major Matching

Majors that are not a good match for the Student
Time run: 10/8/2014 2:23:46 AM

Academic college	Academic major	Prediction
College of Arts & Sciences	Transient	<input type="checkbox"/>
College of Business Admin	Accounting	<input type="checkbox"/>
	Economics	<input type="checkbox"/>
	Finance	<input type="checkbox"/>
	Healthcare Administration	<input type="checkbox"/>
	International Business	<input type="checkbox"/>
	Management	<input type="checkbox"/>
	Marketing	<input type="checkbox"/>
College of Education	Exercise Physiology	<input type="checkbox"/>
	Vo Tech School - Services	<input type="checkbox"/>
College of Nursing	Nursing	<input type="checkbox"/>
	Pre-Nursing	<input type="checkbox"/>
	RN-Nursing	<input type="checkbox"/>
College of Nursing & Health Sc	Exercise Physiology	<input type="checkbox"/>
	Nursing	<input type="checkbox"/>
	Pre-Exercise Physiology	<input type="checkbox"/>
	Pre-Nursing	<input type="checkbox"/>
	RN-Nursing	<input type="checkbox"/>
College of the Arts	Music Education-Grades PreK-12	<input type="checkbox"/>
	Music Performance	<input type="checkbox"/>



Student Id Enrollment Major

Apply Reset [dropdown]

Predict Major Switching Risk

Report which displays the success of majors for an individual student
Date run: 10/8/2014

Student ID	Major	Prediction
VSU00037	Psychology	High

BA in Biology – Requires a minimum of 120 hours

Student VSU00037 has an average GPA of 3.2

Courses Taken Counting Towards Major

Courses student has taken for major with total credit hours assigned

Major at Graduation

Student ID	Hours needed	Area	Subject	Course number	Course Title	Course grade	Course Credit Hours	
VSU00037	12 Hours Required	F	BIOL	1107K	Principles of Biology I	C	4	
				D	4			
			CHEM	1211	Principles of Chemistry I	B	3	
				1211L	Principles Chem Laboratory I	B	1	
				1212	Principles of Chemistry II	C	3	
		1212L	Principles Chem Laboratory II	B	1			
		Senior College	SPAN	1002	Bg Spa Lng/Intr Hispnc Cult II	B	3	
		12 Hours Required Total				C	19	
		26 Hours required	Senior College	COMM	1100	Human Communication	B	3
					PSYC	3200	Child Psychology	B
3400	Abnormal Psychology			B	3			
3500	Statistical Methods in PSYC			C	3			

Required Classes for Major

List of classes required for earning degree in major
Time run: 10/8/2014 4:28:54 AM

Major at Graduation

Required Classes	Subject	Course number	Area
Required	BIOL	3200	Senior College
		4900	Senior College
6 Hours Required	ASTR	3400	Senior College
		4101	Senior College
		4410	Senior College
		4950	Senior College
		3320	Senior College
	CHEM	3401	Senior College
		3402	Senior College
		3510	Senior College
		3601	Senior College
		3602	Senior College



BA in Biology – Requires a minimum of 120 hours

Student VSU00037 has an average GPA of 3.2

Courses Taken Counting Towards Major

Courses student has taken for major with total credit hours assigned

Major at Graduation **Biology**

Student ID	Hours needed	Area	Subject	Course number	Course Title	Course grade	Course Credit Hours
VSU00037	12 Hours Required	F	BIOL	1107K	Principles of Biology I	⚠ C	4
						⚠ D	4
			CHEM	1211	Principles of Chemistry I	B	3
				1211L	Principles Chem Laboratory I	B	1
				1212	Principles of Chemistry II	⚠ C	3
				1212L	Principles Chem Laboratory II	B	1
	Senior College	SPAN	1002	Bg Spa Lng/Intr Hispnc Cult II	B	3	
	12 Hours Required Total				C	19	
	26 Hours required	Senior College	COMM	1100	Human Communication	B	3
				PSYC	3200	Child Psychology	B
			3400	Abnormal Psychology	B	3	
			3500	Statistical Methods in PSYC	⚠ C	3	
			3600	Experimental Psychology	⚠ C	3	
			3900	Tests and Measurements		3	
			4800	Intr To Clinical Practices		3	
	26 Hours required Total				B	21	
	6 Hours Required	Senior College	CHEM	3401	Organic Chemistry I		4
6 Hours Required Total					4		
Total Hours and Average Grade					C	44	

Required Classes for Major

List of classes required for earning degree in major
Time run: 10/8/2014 4:28:54 AM

Major at Graduation **Biology**

Required Classes	Subject	Course number	Area	
Required	BIOL	3101	Senior College	
		4101	Senior College	
6 Hours Required	ASTR	3400	Senior College	
		4101	Senior College	
6 Hours Required	ASTR	4410	Senior College	
		4950	Senior College	
		CHEM	3320	Senior College
		3401	Senior College	
		3402	Senior College	
	CHEM	3510	Senior College	
		3601	Senior College	
		3602	Senior College	
		3801	Senior College	
		3802	Senior College	
		4310	Senior College	
		4420	Senior College	
		4510	Senior College	
		4910	Senior College	
		4920	Senior College	
CS	3101	Senior College		
	3102	Senior College		
	3200	Senior College		
	3335	Senior College		
	3340	Senior College		
3410	Senior College			

Rows 1 - 25

Real-Time Math At-Risk Models

Decision Tree Model that Determines At-Risk in Math

Displays rules that were generated from decision tree model to determine if a student is at risk
Time run: 8/13/2014 10:38:35 AM

Rule Number	Rule that Determines At-Risk
10	(HSGPA in ("2")) AND (HSRank in ("1" "2"))
11	(HSGPA in ("2")) AND (HSRank in ("3" "4" "9"))
12	(SAT_MATH <= 485) AND (HSGPA in ("3")) AND (HSRank in ("1" "2"))
13	(SAT_MATH <= 485) AND (HSGPA in ("3")) AND (HSRank in ("3" "4" "9"))
14	(SAT_MATH <= 485) AND (HSGPA in ("4"))
15	(SAT_MATH > 485) AND (HSGPA in ("3"))
16	(SAT_MATH > 485) AND (HSGPA in ("4"))
8	(HSGPA in ("1")) AND (SAT_MATH <= 485)
9	(HSGPA in ("1")) AND (SAT_MATH > 485)

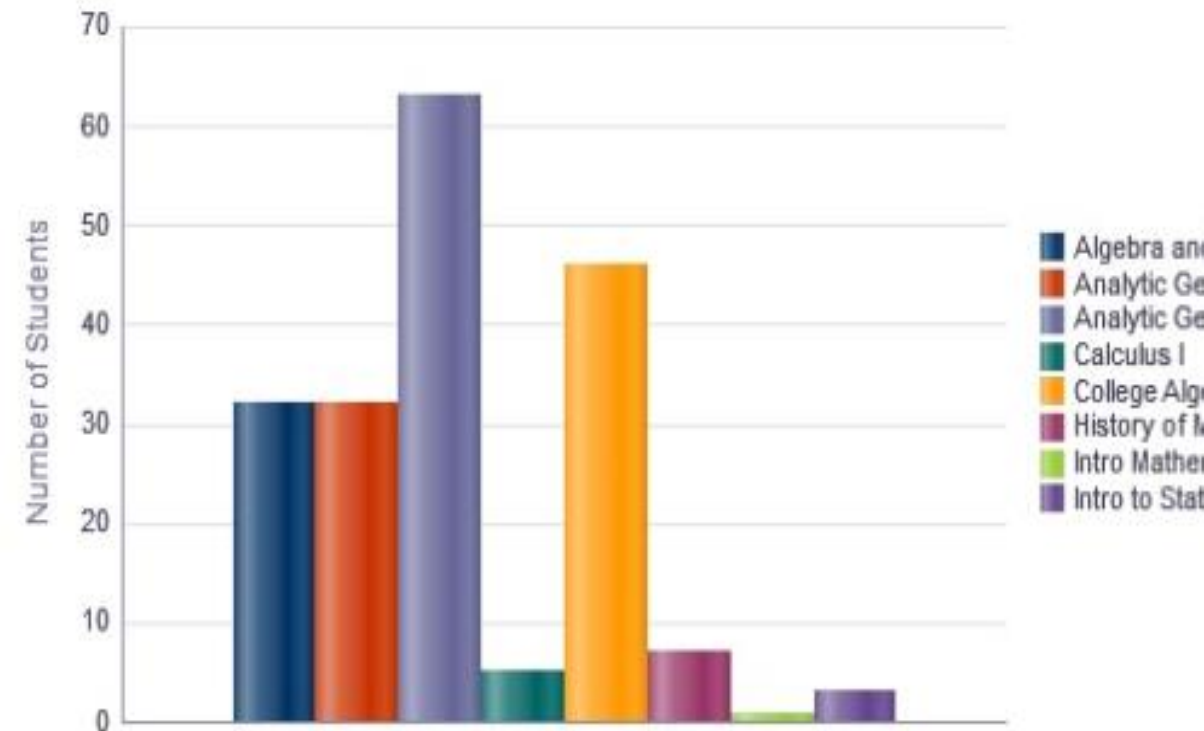
[Analyze](#) - [Edit](#) - [Refresh](#) - [Print](#) - [Add to Briefing Book](#) - [Copy](#)

At-Risk Students by Course Name



Displays At-Risk Students by Course Name
Time run: 8/13/2014 10:38:35 AM

Number of At-Risk Students by Class

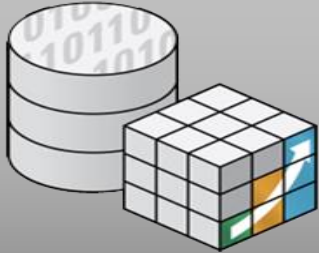
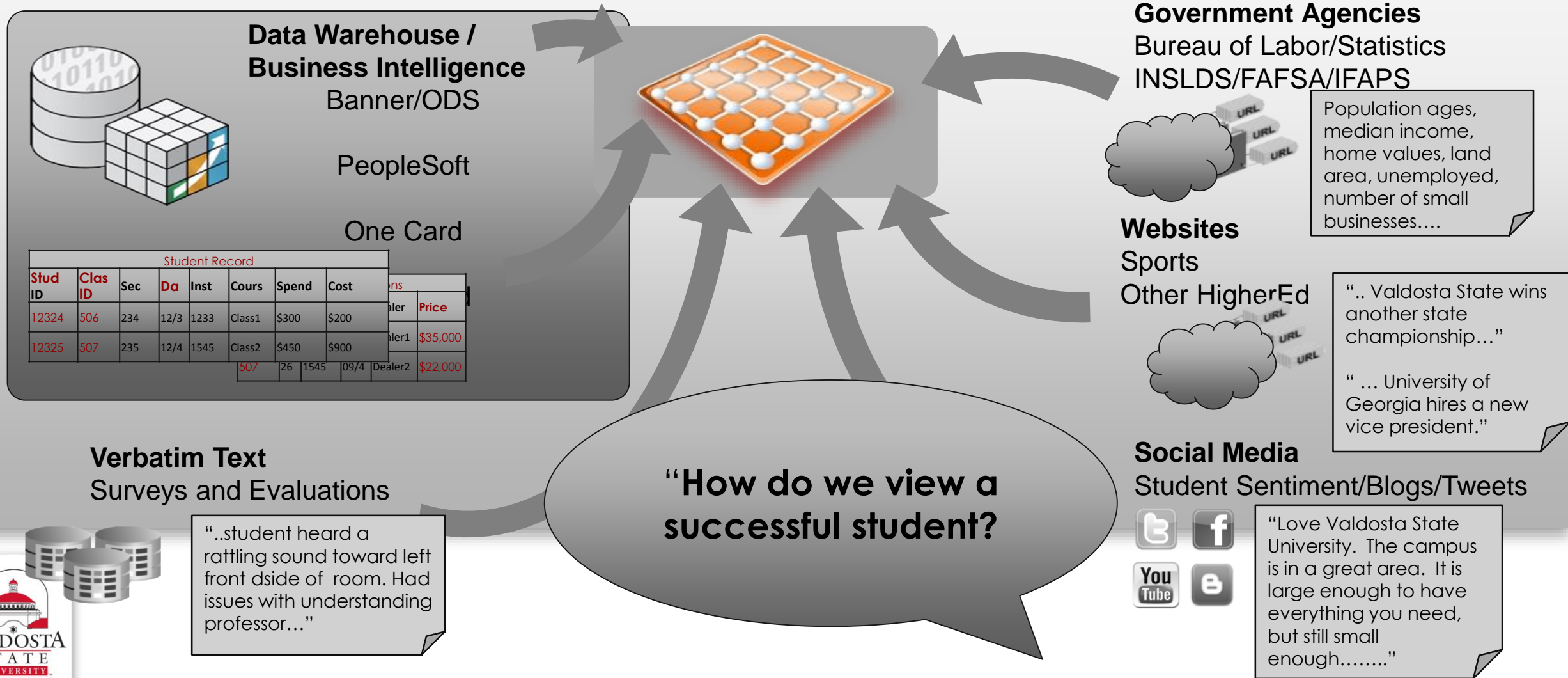


Endeca Information Discovery

- ▶ Analyze data from any source
- ▶ Measure and quantify student engagement
- ▶ Combine both structured and unstructured data
- ▶ Provide sentiment analysis on surveys and social media
- ▶ Measure the impact social and engagement metrics have on retention and graduation rates



Oracle Endeca Information Discovery: Understand the Complete Picture



Student Record										
Stud ID	Clas ID	Sec	Da	Inst	Cours	Spend	Cost	ns	Price	
12324	506	234	12/3	1233	Class1	\$300	\$200	aler		
12325	507	235	12/4	1545	Class2	\$450	\$900	aler1	\$35,000	
					507	26	1545	09/4	Dealer2	\$22,000

Population ages, median income, home values, land area, unemployed, number of small businesses....

“.. Valdosta State wins another state championship...”
“... University of Georgia hires a new vice president.”

“Love Valdosta State University. The campus is in a great area. It is large enough to have everything you need, but still small enough.....”



▼ Enrolled Term

Search for specific value...

- Fall 2012 (1178)
- Spring 2013 (1090)
- Fall 2013 (885)
- Spring 2014 (843)
- Fall 2014 (729)
- Summer 2014 (302)
- Summer 2013 (198)

Select All

▼ Student GPA

- ▶ High School GPA
- ▶ Institutional Term GPA
- ▼ Full Cumulative GPA

Between -

5224 results

Submit

- ▶ SAT Verbal
- ▼ Purchases
- ▶ Enrolled Term
- ▶ Purchase Amount
- ▼ Financial Aid
- ▶ Parent Marital Status
- ▶ Parent Taxes Paid
- ▶ Parent Adjusted Income
- ▶ Enrolled Family Members
- ▶ Total Parent Contribution
- ▶ Other Fed Grants
- ▶ Other Fed Loans
- ▶ Other Loans
- ▶ Pell Received
- ▶ Hope Received
- ▶ Private Scholarships
- ▶ Primary Parent Contr
- ▶ Par 2 Adj Avail Income
- ▶ Secondary Parent Contr
- ▼ Student Flags
- ▶ Graduated This Term
- ▶ At Risk General
- ▶ At Risk Math
- ▶ Registered Full Time
- ▶ Transfer Student

- ▶ Enrolled Term
- ▼ Student Demographics
- ▶ County Residence
- ▶ High School
- ▶ Citizen
- ▶ Ethnicity
- ▶ Gender
- ▶ Race
- ▼ Sport

Search for specific value...

 - Football (57)
 - Soccer (40)
 - Dance (39)
 - Cheerleader (30)
 - Baseball (18)
 - Softball (17)
 - Women-Cross Country (10)
 - Men-Cross Country (8)
 - Men-Tennis (5)
 - Women-Basketball (5)
 - Volleyball (4)

- ▼ Course Type
- ▶ Hybrid Courses
- ▶ Partially Online Courses
- ▶ Vista Online Courses
- ▶ Tech Enhanced Courses
- ▶ Kingsbay Campus
- ▶ Military Campus Courses
- ▶ Offsite Campus Courses
- ▶ Online Campus Courses
- ▶ Gomi Campus Courses
- ▶ Ecore Campus Courses
- ▶ Emajor Campus Courses
- ▶ Webmba Campus Courses
- ▼ Student Courses
- ▶ Enrolled Term
- ▶ Freshman Learning
- ▶ Student Athlete
- ▶ Student Class
- ▶ Student Level
- ▶ Student Type
- ▶ Academic Collene

Search Box

Search Within

Breadcrumbs

No refinements have been selected.

Range Filters

Success Counts

Success Hours

- Guided Navigation
- Student
 - Student Courses
 - Student Demographics
 - Student Employess
 - Student Flags
 - Student GPA
 - Student MultiAssign
 - Success Center
 - Financial Aid
 - Labor Data
 - Purchases
 - Card Access
 - Indicators
 - Course Type

Bookmarks

Filter bookmarks...

My Bookmarks

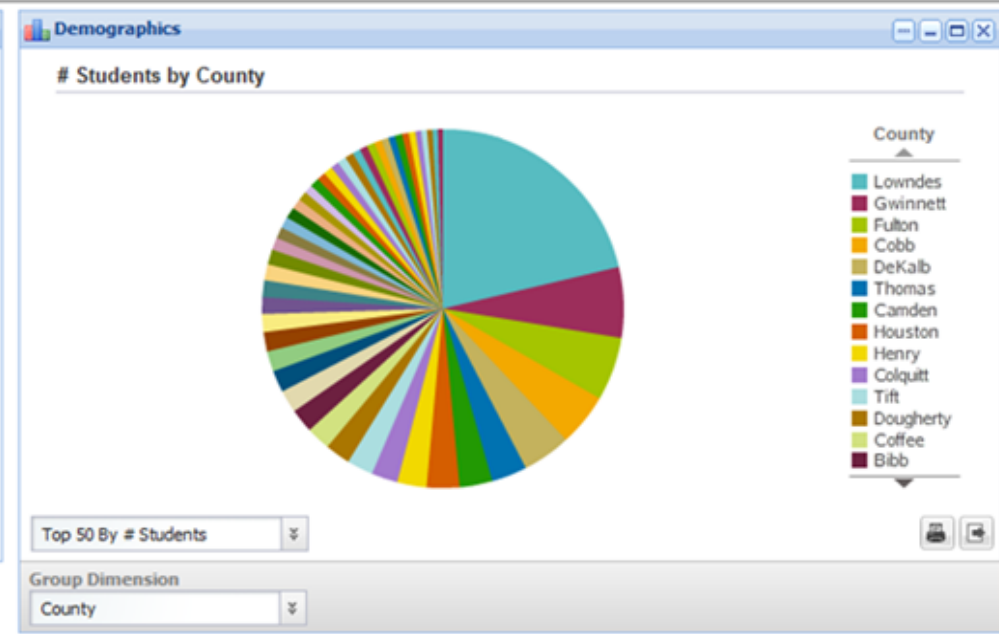
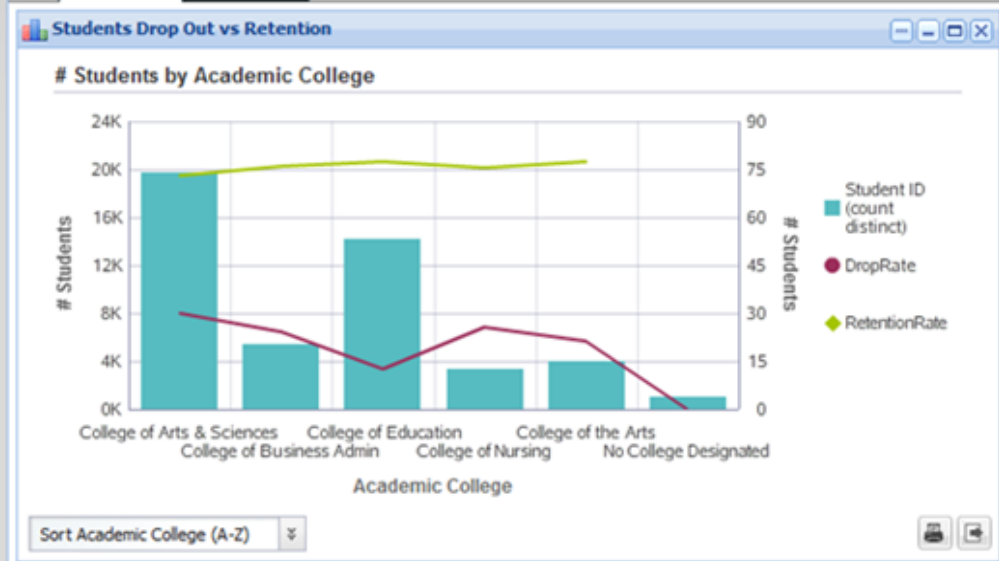
Name	Description	Date ...	Actions
No bookmarks matched your filter.			

Create New Bookmark

Student Metrics

At Risk Rate 17%	Drop Out Rate 24%	High School GPA 3.08	Cumulative GPA 2.96	Student Sentiment 21.73%
---------------------	----------------------	-------------------------	------------------------	-----------------------------

Student Location



Detail Records

Column Sets: Student

D...	Student ID	Attempted Hours	Earned Hrs	Face To Face Courses	First Generation	FTE	Fully Online Courses	High School Grad Year	Lives
<input type="checkbox"/>	000380A9A619DAC486F1...	6.000000	0.000000	0.000000	N	0.666667	2.000000		N
<input type="checkbox"/>	000380A9A619DAC486F1...	6.000000	0.000000	0.000000	Y	0.666667	2.000000		N
<input type="checkbox"/>	000380A9A619DAC486F1...	9.000000	0.000000	0.000000	N	1.000000	3.000000		N
<input type="checkbox"/>	0007F307E6A1B6DD2C39...	3.000000	3.000000	1.000000	N	0.250000	0.000000	2008	N
<input type="checkbox"/>	0007F307E6A1B6DD2C39...	4.000000	4.000000	1.000000	N	0.333333	0.000000	2008	N
<input type="checkbox"/>	000837BB026C2AC39A00...	14.000000	8.000000	6.000000	N	1.000000	0.000000	2012	N
<input type="checkbox"/>	000837BB026C2AC39A00...	18.000000	0.000000	6.000000	N	1.000000	0.000000	2012	N
<input type="checkbox"/>	000AB70F6964700971477...	9.000000	7.000000	4.000000	N	0.750000	0.000000	2000	N
<input type="checkbox"/>	000AB70F6964700971477...	5.000000	5.000000	2.000000	N	0.416667	0.000000	2000	N
<input type="checkbox"/>	000AB70F6964700971477...								

Page 1 of 19855 Records per page

Displaying records 1 - 10 of 198550

Search Box

 Search within

Course Metrics

59,207 # Students 3,144 Number of Courses

Selected Refinements

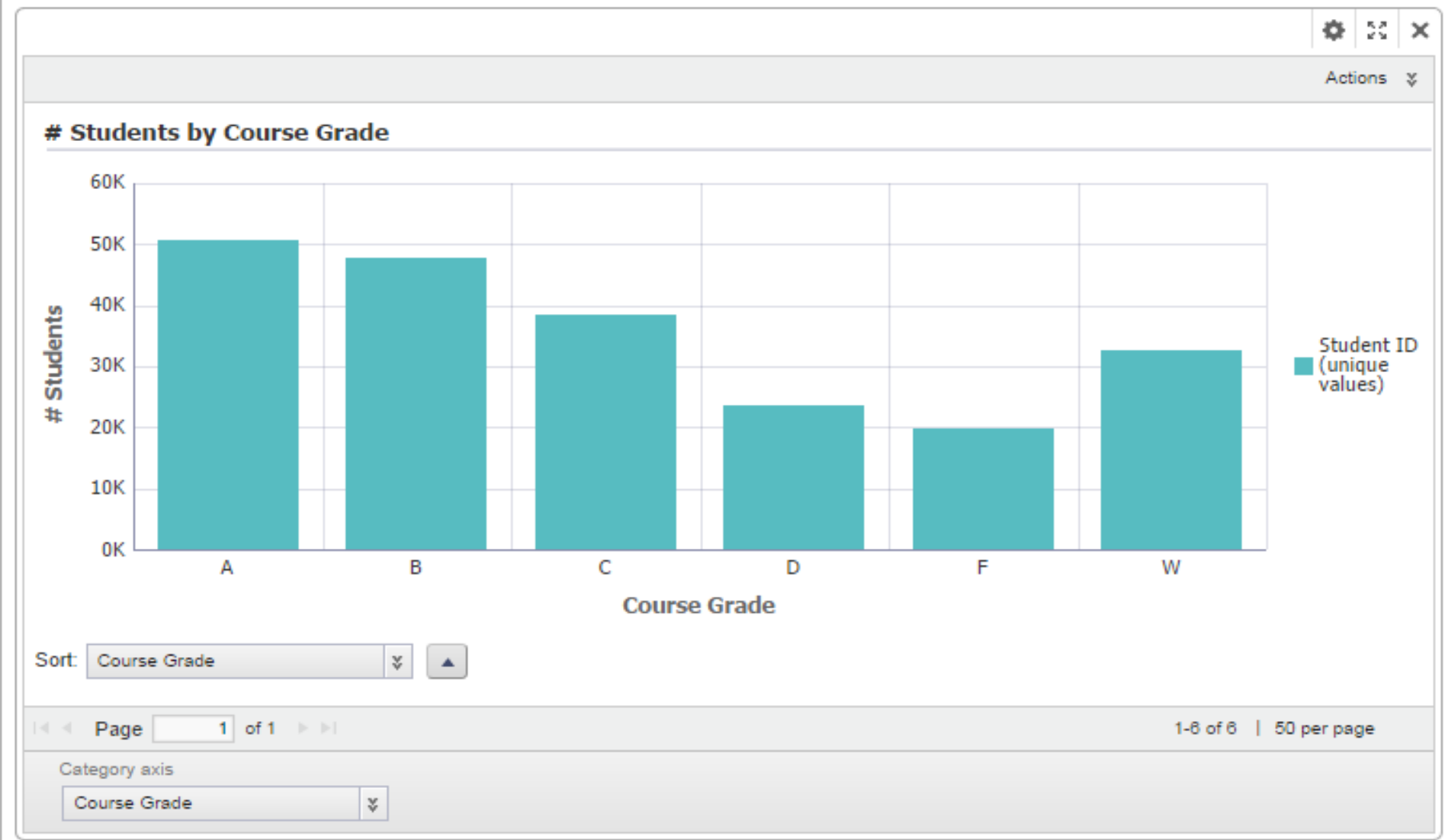
▶ Course Grade (6 Values)

Reset

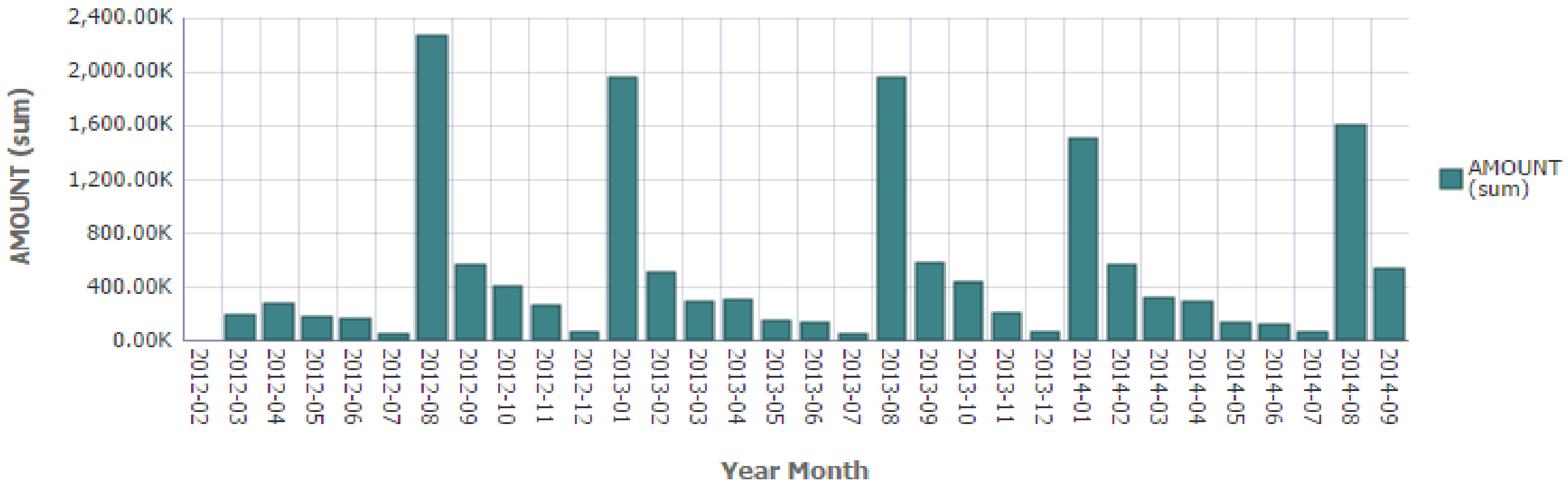
Available Refinements

- ▶ Student Demographics
- ▶ Student Flags
- ▶ Success Center
- ▶ Student
- ▼ Student Courses
 - ▶ Course Attributes
 - ▼ Course Campus
 - Search for specific value...
 - Main Campus (1362680)
 - Online Campus (105756)
 - Off Campus (31128)
 - Kingsbay Campus (29291)
 - Georgia on my Line (20870)
 - eCore Campus (12509)
 - Military Base Campus (8462)
 - Study Abroad (6285)
 - eMajor Campus (5264)
 - MPA online (3117)
 - WebMBA Campus (1400)

Component Container



AMOUNT (sum) by Year Month



Sort: Year Month

Value axis: AMOUNT (sum)

Color: (none)

Purchase Metrics

14,603

Students

\$16,054,431

Total \$ Amount

1,912,588

Total Transactions

\$8.39

Avg \$ per Transaction

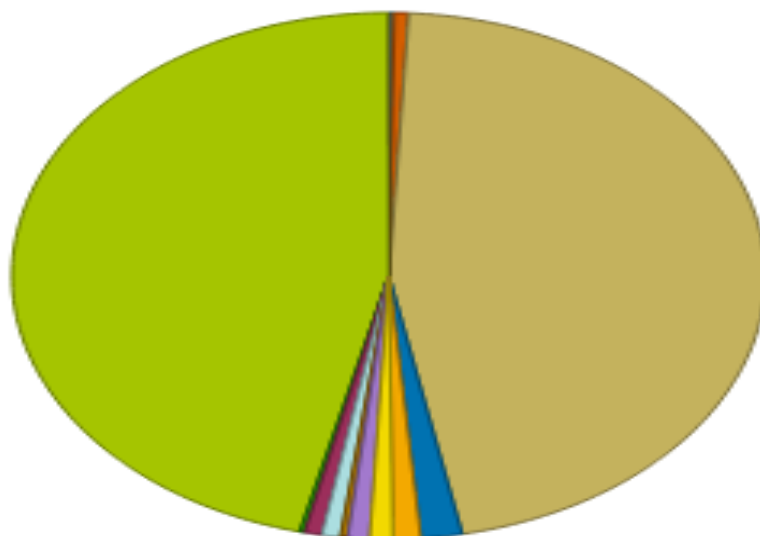
2,035

Transactions Per Day



Actions

AMOUNT (sum) by Merchant Name



- Merchant Name**
- 1 Card
 - Beverage
 - Dining
 - iValidate Events
 - Laundry
 - Off Campus Tapingo
 - On Campus Tapingo
 - Parking
 - Printing
 - Snack
 - Student Health
 - Student Rec
 - University Stores
 - Verifones

Sort: Merchant Name

Page 1 of 1

1-14 of 14 | Show all

Value: AMOUNT (sum) Color: Merchant Name

Search Box

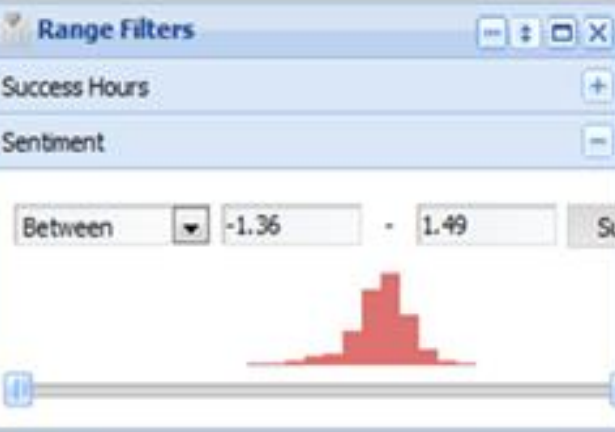
Search Within

Course Metrics

Sentiment 34%	Students 40,472	Number of Courses 2,446	Courses by Instructor 4
------------------	--------------------	----------------------------	----------------------------

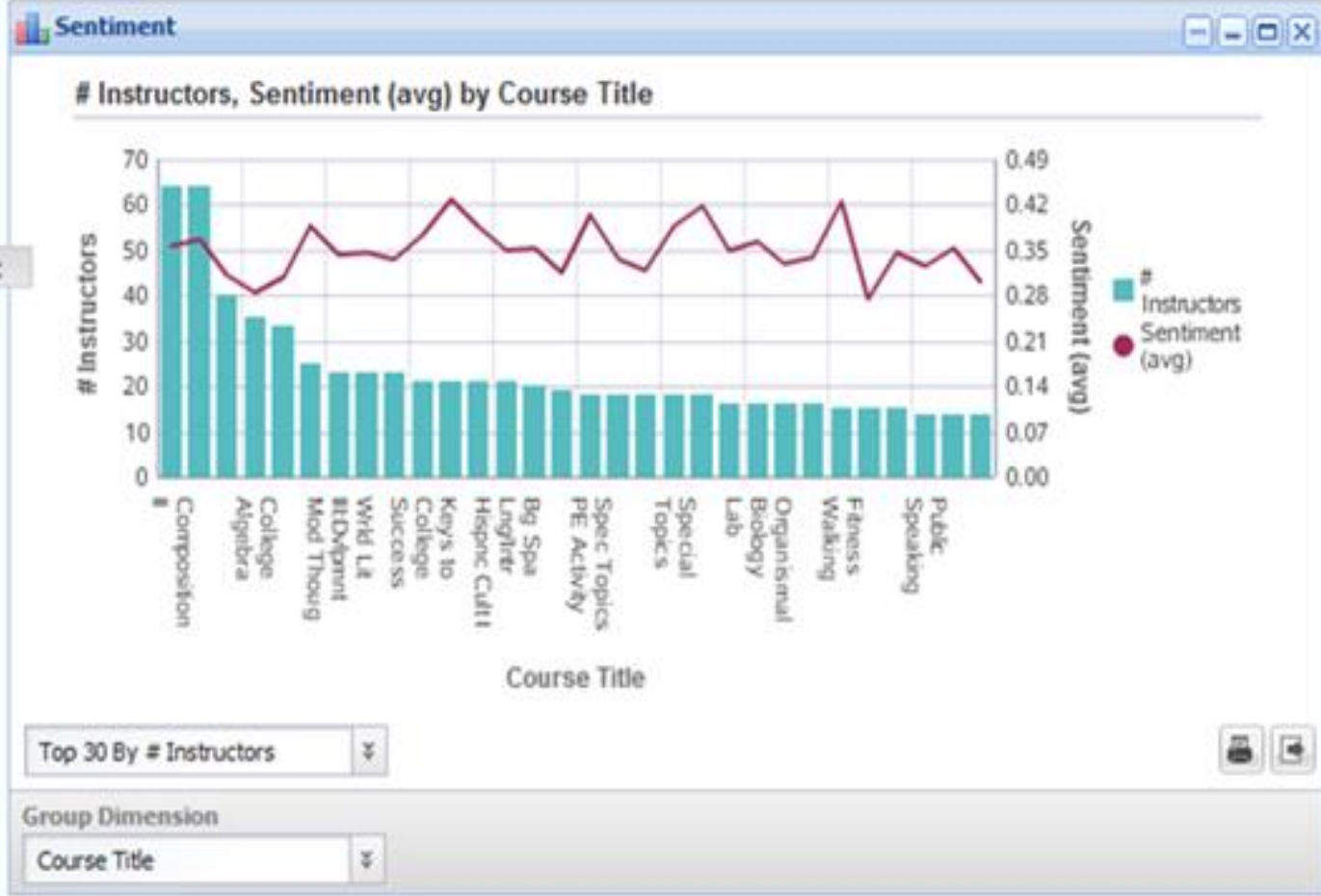
Breadcrumbs

No refinements have been selected.



- Guided Navigation
- Student
 - Student Courses
 - Success Center
 - Student Demographics
 - Evaluation
 - Student Flags

Bookmarks



always willing busy work

class discussions class fun

class time

course content

course material

due dates extra credit good teacher

good work great class

great teacher group work

little bit power points study guides

subject matter

teaching style



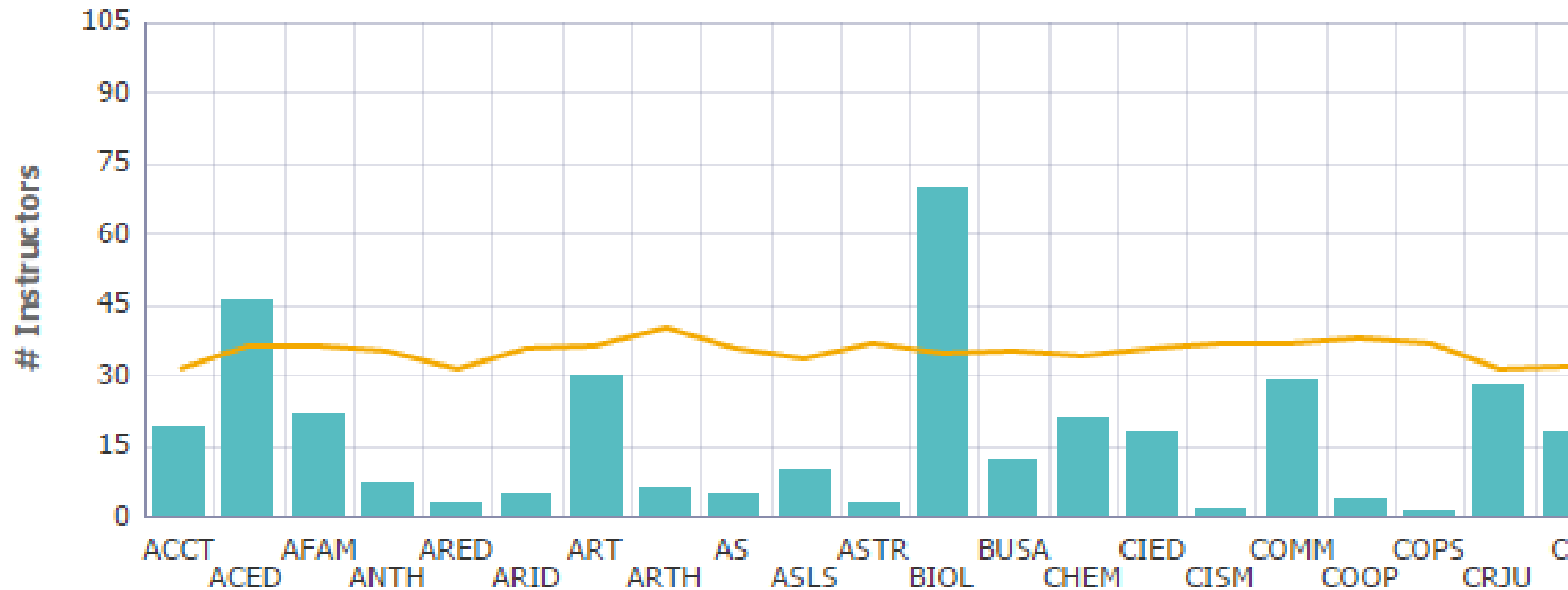
Explore Themes by Number of records



Sentiment

Chart

Instructors by Course Subject



Sort: Course Subject

Page 1 of 3

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