# Actionable Intelligence: Improving Student Success

### Strategic Goals

- 1. Improve retention, progression, and graduation rates
- 2. Improve student success with predictive analytics
- 3. Proactive intervention and early alerts
- 4. Improve faculty and staff communications
- 5. Flexibility and agility



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?

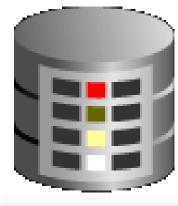


### Valdosta State Current Business Intelligence Architecture



Custom Data Warehouse

















### **Oracle CRM On Demand**

Get smarter. Get more productive. Get the best value, period.





### Oracle BI Cloud Services (BICS)

- ► 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

### Previous Faculty Portal (2012-2015)

- Access to class roster and advisees
- ► Early alert for proactive intervention strategies
- ▶ Basic reports and data
- ▶ Provide online forms and customizations
- ► Data driven applications





### Academic Affairs Faculty Portal

lain Advisor Co

ses At-R

**Data Warehouse Tools** 

Applications/Portals

ontact Brian Haugabrook, Director of Data Warehouse, for any questions. Email: <a href="mailto:bahaugab@valdosta.edu">bahaugab@valdosta.edu</a>, Phone: (229) 333-7447 ou can also email the VSU Data Warehouse department (<a href="mailto:VSUDataWarehouse@valdosta.edu">VSUDataWarehouse@valdosta.edu</a>) 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.

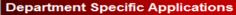
For more information click here.

#### 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.





**COE Advising Scheduler** 

**Nursing Advising Scheduler** 

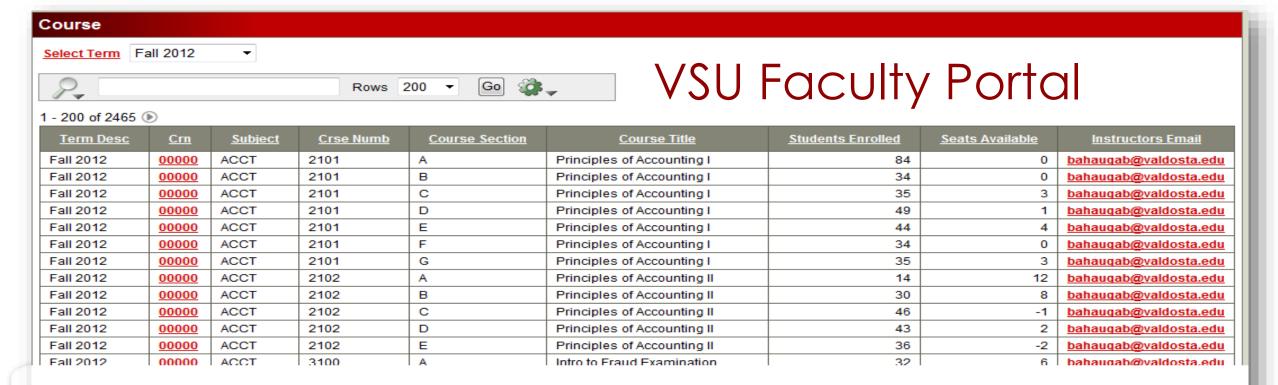
OASIS Advising Scheduler

Student Success Center Scheduler

Social Work Information System (SWIS)



### Interactive Course Summary



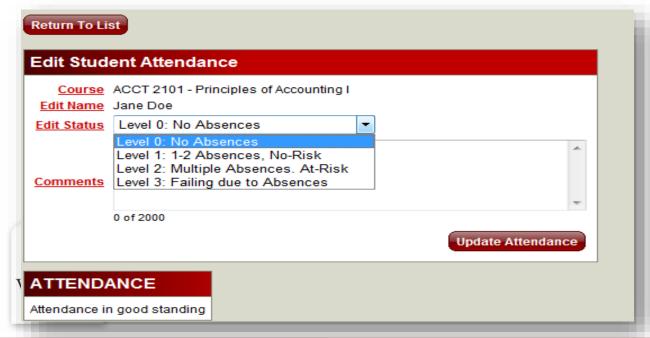


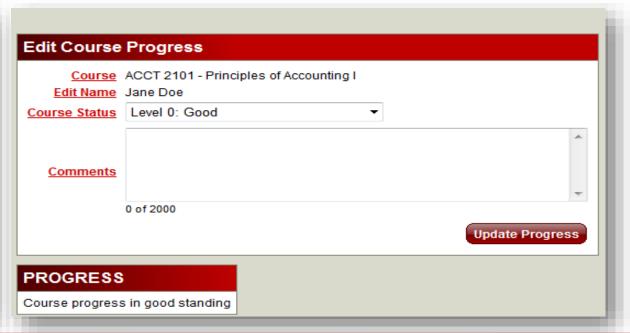
### Class Roster that Highlights At-Risk Students



## Automatic Alerts, Triggers, and Events

- ➤ 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





# 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

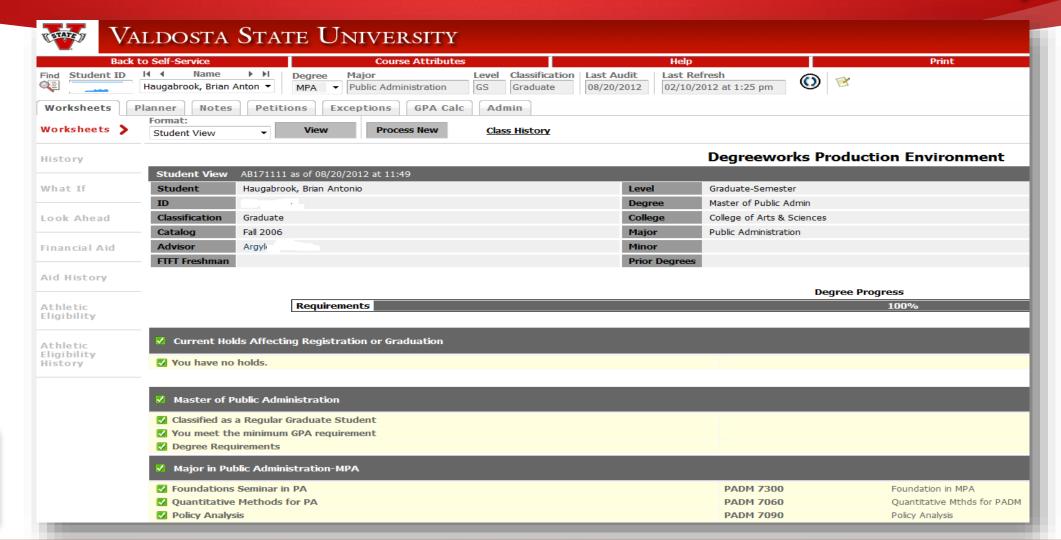
**Return To List** 

### Student Schedule

Ш	CRN	Course	Instructor Email	Attendance Status	Attendance Comments
	80354	ENGL 1101 T - Composition I	jdoe@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	jdoe@valdosta.edu		
	80643	VSU 1101 K - Keys to College Success	jdoe@valdosta.edu		
	81056	PHIL 2010 B - Fundamentals of Philosophy	jdoe@valdosta.edu		
	81213	HIST 2112 K - United States History Sn 1865	idoe@valdosta.edu		



### **Custom Application Integrations**





### ${\it ass}$ | Actionable Student Intelligence

Student Information Systems

Banner

PeopleSoft

### **ERP ANALYSTS**

ODS, DW, Big Data, Predictive Analytics

> ASI Delivered Cloud Solutions



**Enterprise** 



**Reports & Dashboards** 

ASI Data Integration into Existing Applications and Reporting Solutions

Oracle BI Cloud

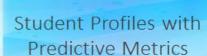
Oracle OBIEE

Banner Reports

Tableau

**Existing ODS/DW** 

**Big Data** 



Student Name: John Sample

**Faculty/Advisor Portal** 

Major: Psychology

Risk Factor: Moderate

Performance-Based Funding Metrics

Actionable Analytics for Early Intervention

**Student Portal** 



### ASI Faculty/Advisor Portal

- ► Rapid application development platform
- Access to all data stored in BICS or on premise
- Setup reports, jobs, and users
- ▶ Provide online forms and business applications
- ▶ Data driven mobile applications



### Home

### ASI Faculty Porta



Courses Taught

Flags Set 67



# of At-Risk 35

Female to Male Ratio





### Interactive Course Summary



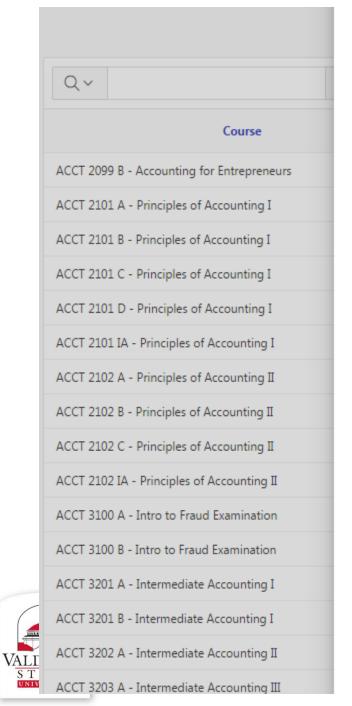
Term Fall 2015 \$

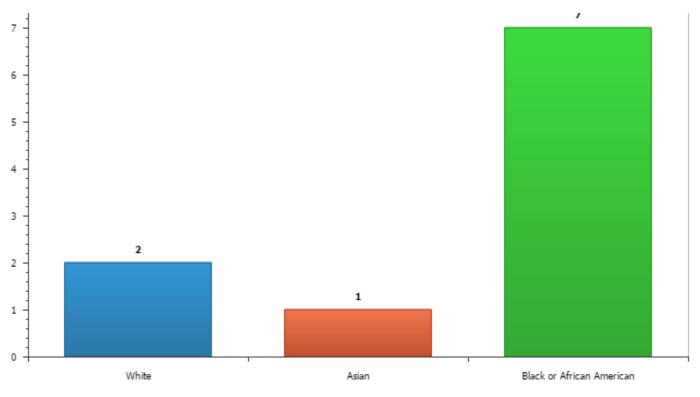
Actions >

### **ASI Faculty Portal**

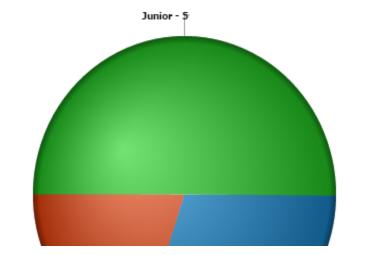
Course	Students	Course Statistics	Student Demographics	Students Enrolled	Seats Available	Instruct
ACCT 2099 B - Accounting for Entrepreneurs	View Students	View Course Statistics	View Student Demographics	10	24	instructor@university.edu
ACCT 2101 A - Principles of Accounting I	View Students	View Course Statistics	View Student Demographics	137	180	instructor@university.edu
ACCT 2101 B - Principles of Accounting I	View Students	View Course Statistics	View Student Demographics	38	42	instructor@university.edu
ACCT 2101 C - Principles of Accounting I	View Students	View Course Statistics	View Student Demographics	72	42	instructor@university.edu ; instruct
ACCT 2101 D - Principles of Accounting I	View Students	View Course Statistics	View Student Demographics	64	42	instructor@university.edu ; instruct
ACCT 2101 IA - Principles of Accounting I	View Students	View Course Statistics	View Student Demographics	38	40	instructor@university.edu
ACCT 2102 A - Principles of Accounting II	View Students	View Course Statistics	View Student Demographics	33	48	instructor@university.edu
ACCT 2102 B - Principles of Accounting II	View Students	View Course Statistics	View Student Demographics	116	130	instructor@university.edu



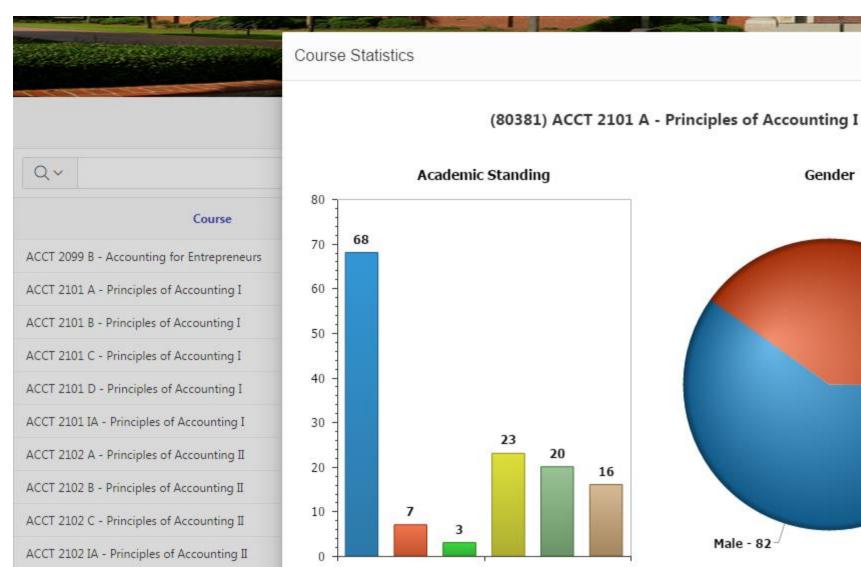




### Student Classification









X

ents Enrolled

10

137

38

72

64

38

33

116

28

26

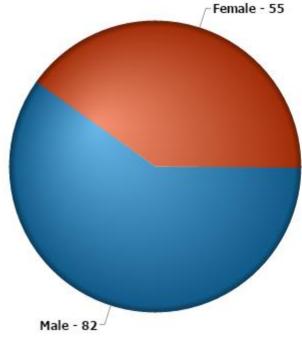
17

50

24

14

Seats Availab



Seats Available

200 ¬	
	180
1	1

Good Standing

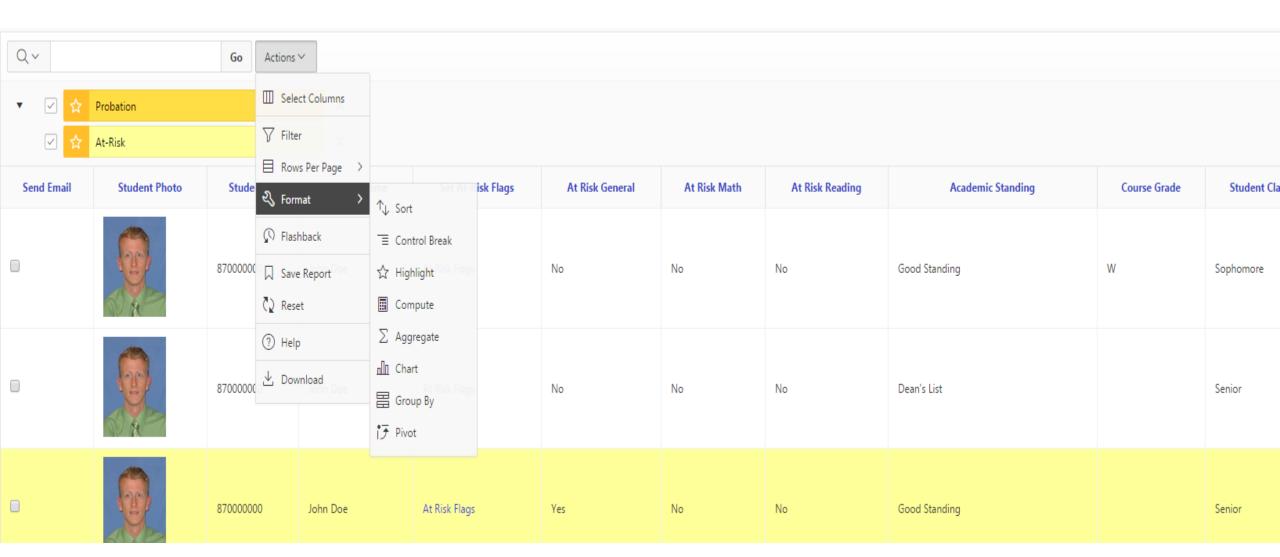
N/A

ACCT 3100 A - Intro to Fraud Examination

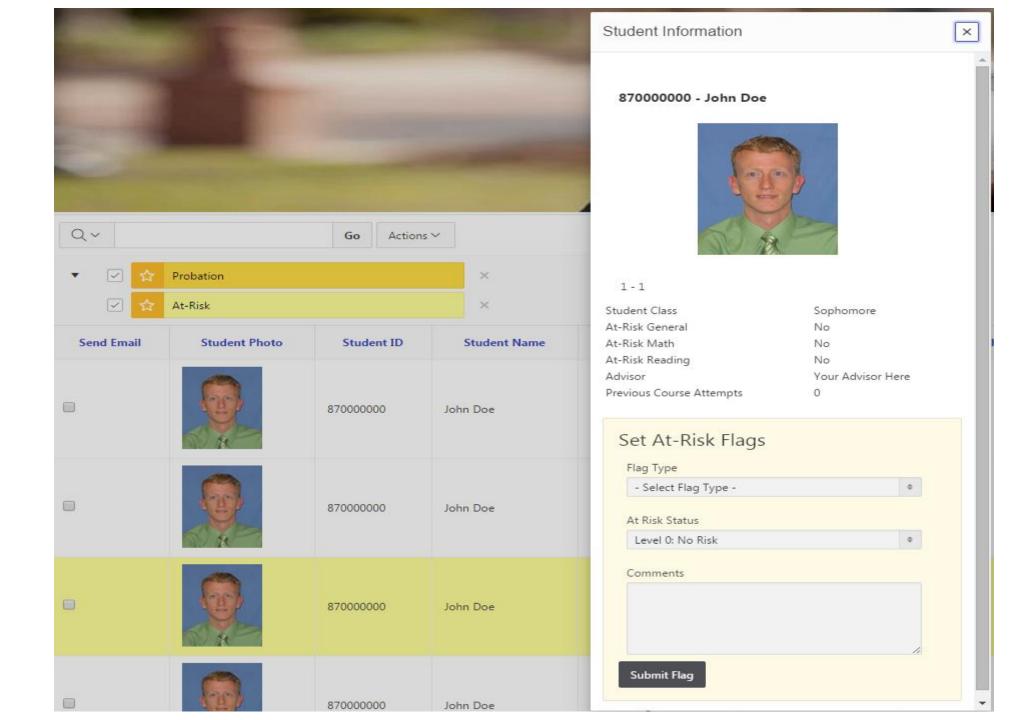
ACCT 3100 B - Intro to Fraud Examination

ACCT 3201 A - Intermediate Accounting I

ACCT 3201 B - Intermediate Accounting I





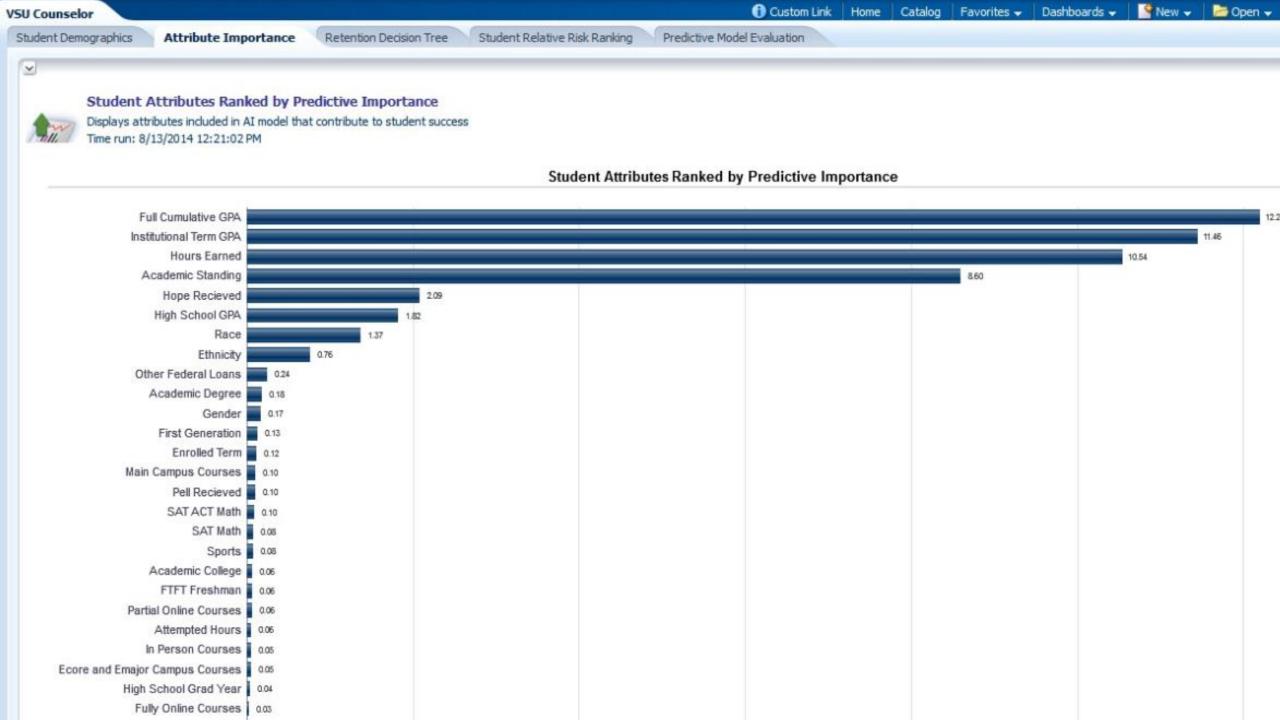


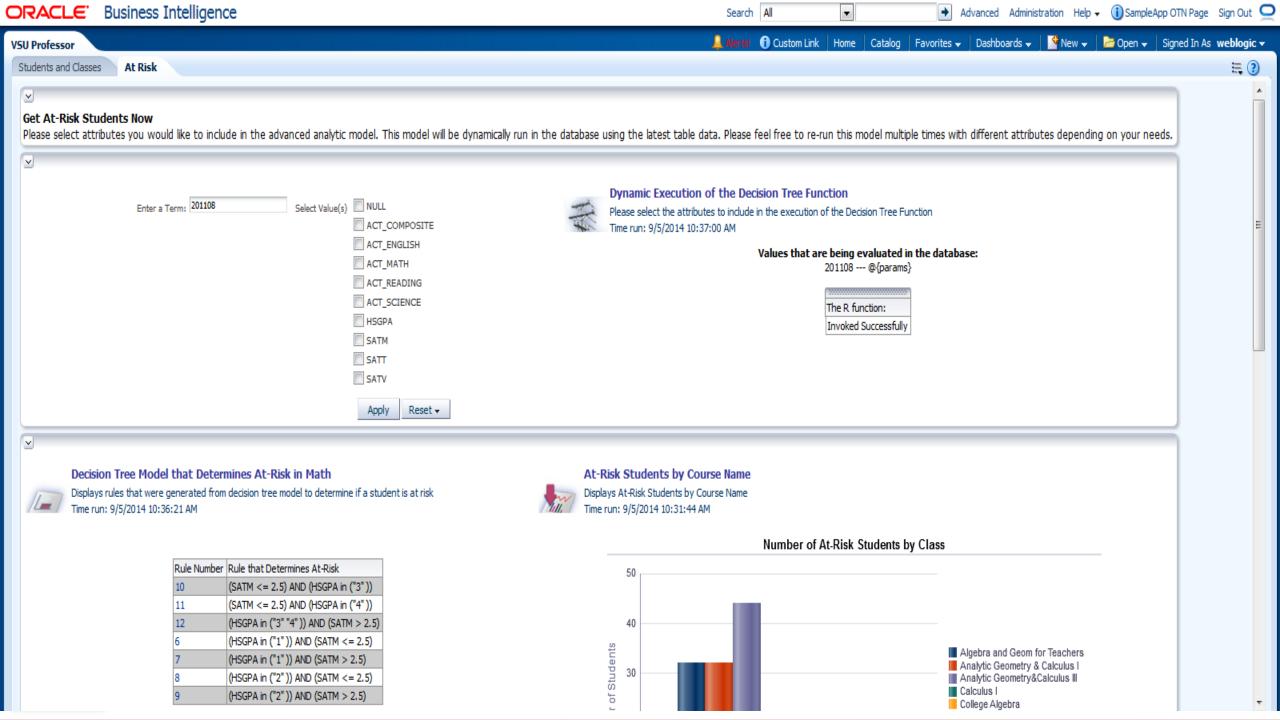
### **Predictive Analytics**

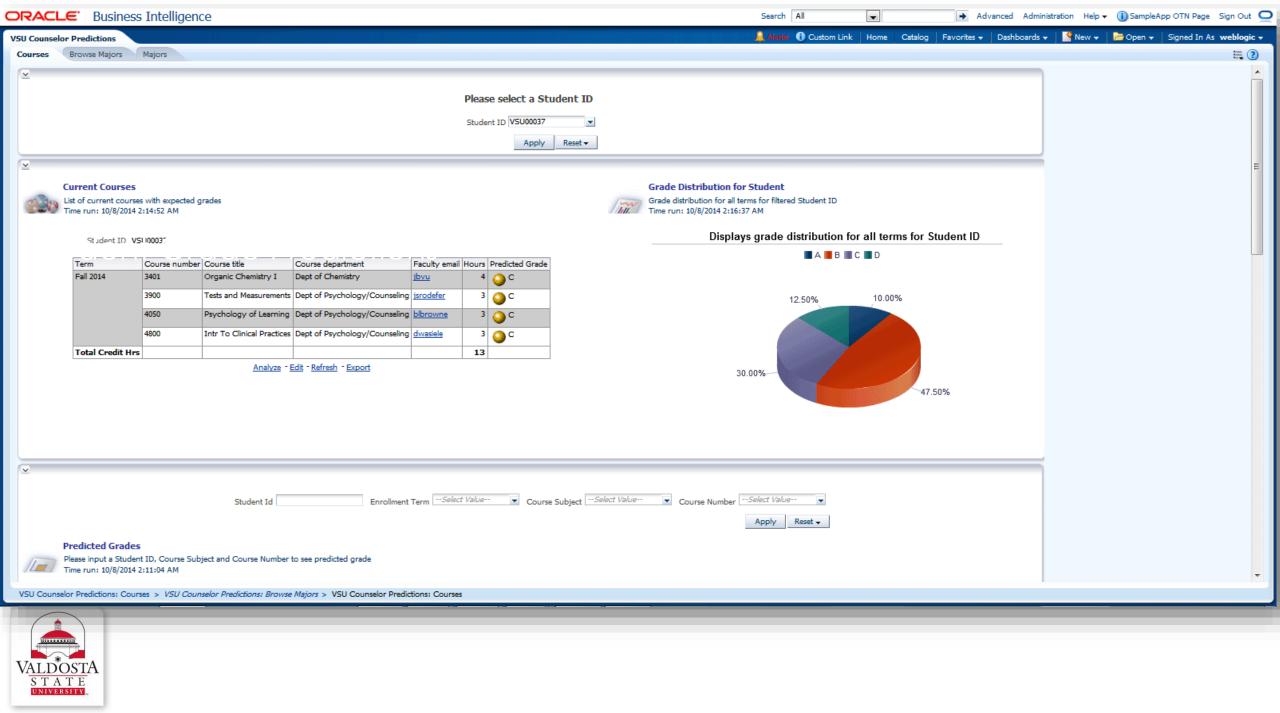
- ► Identify key attributes to improve student success
- Create individual student success probability
- ▶ Data mining and full access to models
- ► Provide students with predicted course and program difficulty

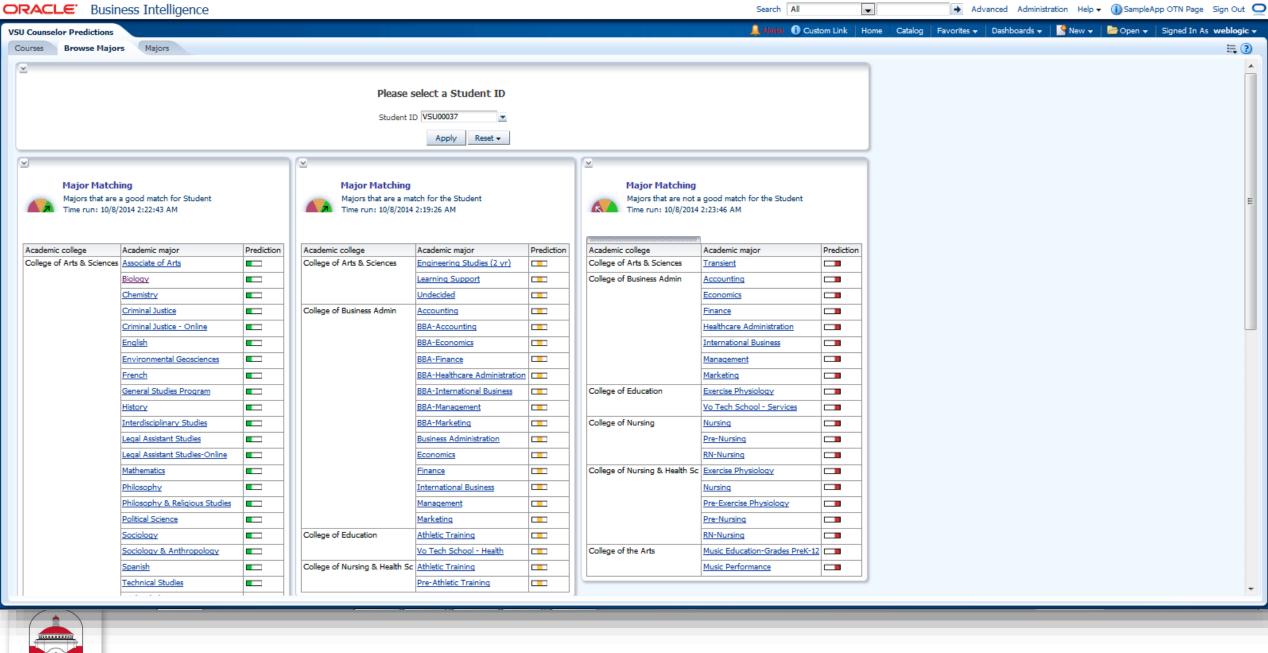


Compare predictions with historic patterns to improve accuracy

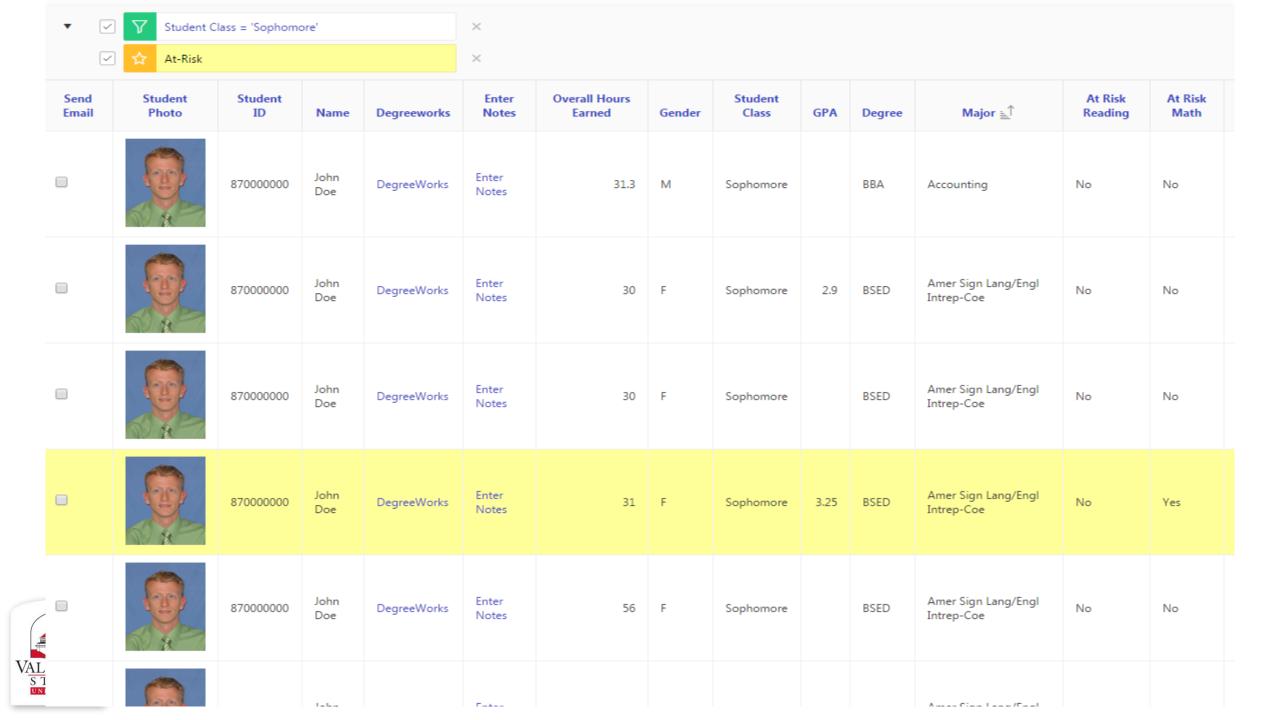


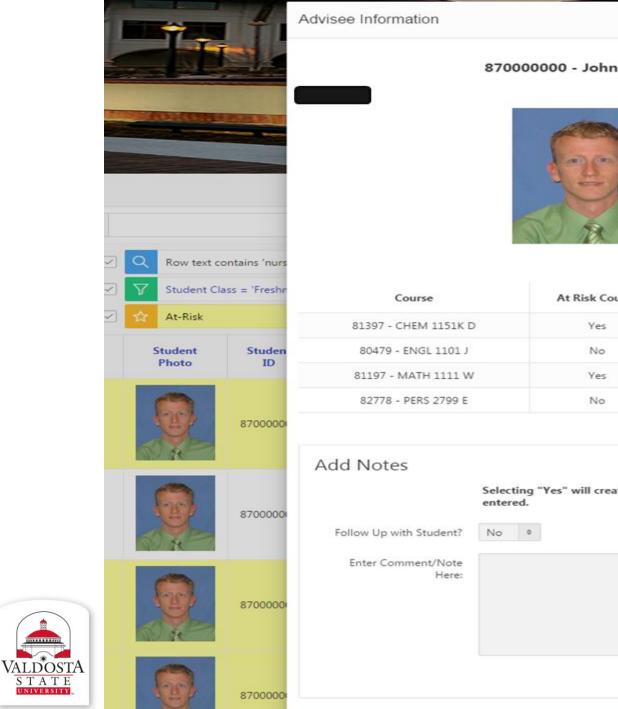




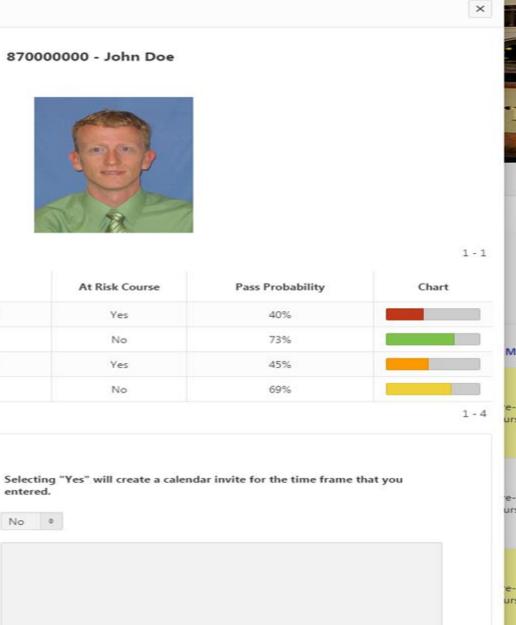




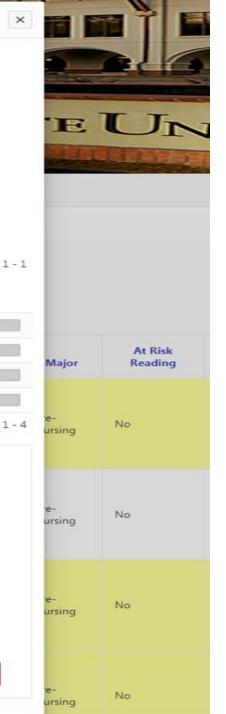




STATE UNIVERSITY



Save Notes



### Oracle BI Cloud Services (BICS) Integration

- ► Improve information access and delivery
- ▶ Provide key reports and analysis
- ► Visual analyzer
- ► Drag-n-Drop reporting
- ► Historical trends and patterns
- ► Oracle BI Cloud option

### ORACLE Business Intelligence Cloud Service



#### Load Data

Upload and refresh your data.



Organize and relate your data for analysis. Define facts, dimensions and hierarchies.



Manage
Manage users and roles. Take and restore snapshots of your service.



### Create an Analysis Query and report your data.



Create a Visual Analyzer Project
Explore your data and discover insight.



#### Create a Dashboard

Create a Dashboard
Combine analyses and prompts into
Interactive Dashboard applications.



Browse and organize the content in your catalog.



#### **Get Started**

Learn more about your service.



### Recent

### **Favorites**



### University\_Enrollment - page 1

9/13/2015 7:12:05 PM



### Academic Dashboard - page 1

4/6/2015 3:03:29 PM



### University Enrollment - page 2

9/13/2015 4:46:43 PM



### Term Gender Pie Chart

9/3/2015 7:54:22 PM



### Term Hours Complete Table

9/13/2015 4:33:05 PM



### Term\_Earned\_Hours\_Table

9/13/2015 4:27:07 PM



### Term\_Earned\_Hours\_Bar

9/13/2015 4:28:40 PM



### Term\_Attempted\_Hours\_Bar

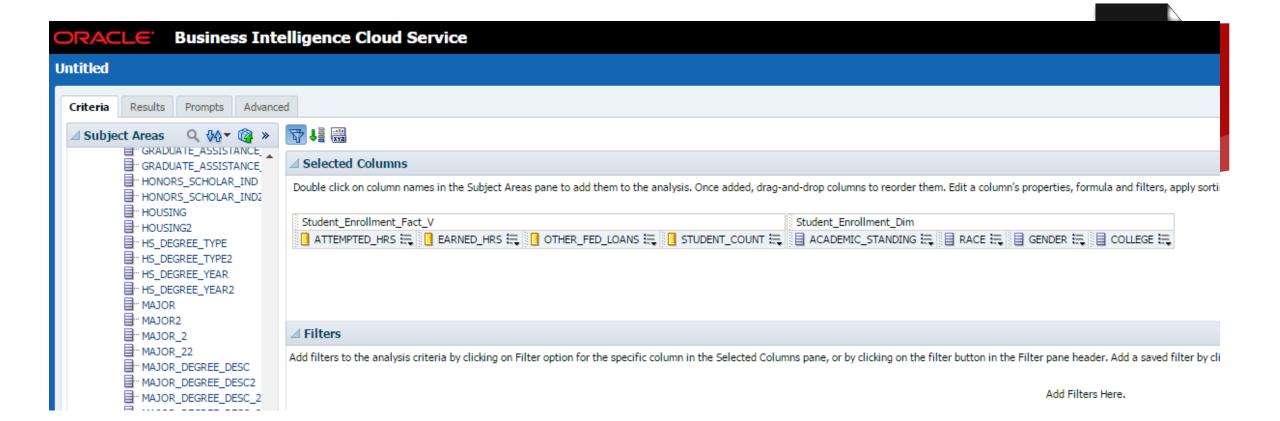
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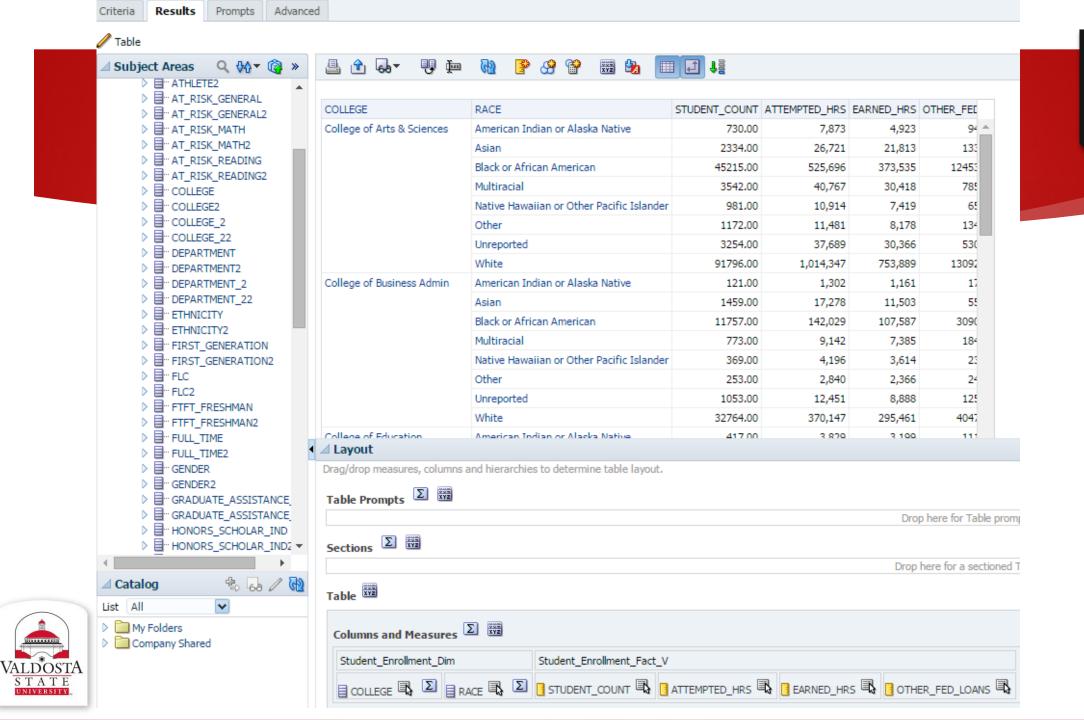
### Oracle BICS – Data Sync

- ► Transfer data between cloud and/or on premise
- ► Secure data loads to Oracle BICS/DBaaS
- Transfer over 400,000 records per minute
- ► Schedule automatic loads and notifications









#### ORACLE Business Intelligence Cloud Service Academic Dashboard **Student Enrollment Analysis** Attempted Hours by Semester Data Filters Select a View -> Treemap ▼ Academic Year Attempted Hours --Select Value--Term College of Business Academic College Spring Summer Total Between --Select Value----Select Value--Admin College of Arts & Sciences 4,046,927 3,865,609 879,257 8,791,793 College of Arts & Sciences Apply Reset ▼ College of Business Admin 1,415,984 1,347,452 300,877 3,064,313 College of Education 3,156,688 3,022,965 966,780 7,146,433 College of the Arts College of Nursing 531,302 502,663 107,586 1,141,551

College of Education

College of Nursing & Health Sc 140,783 140,887

1,126,484

College of the Arts

No College Designated ⟨ ▷

College of Nursing &

Health Sc

College Design.

No

College of Nursing 23,292 304,962

161,097 2,358,048

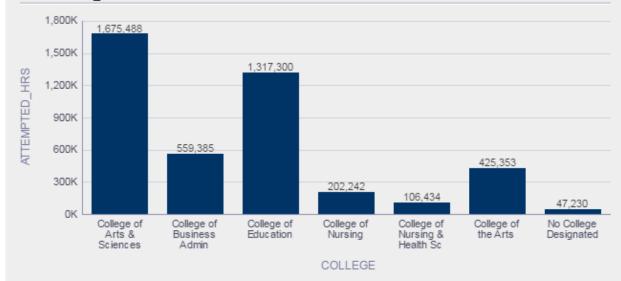
79,034 79,282 26,866 **185,182** 



### Earned Hours

COLLEGE	ATTEMPTED HRS	EARNED HRS	PERCENT COMPLETE
College of Arts & Sciences	1,675,488	1,230,541	73.44%
College of Business Admin	559,385	437,965	78.29%
College of Education	1,317,300	1,068,737	81.13%
College of Nursing	202,242	177,485	87.76%
College of Nursing & Health Sc	106,434	63,459	59.62%
College of the Arts	425,353	359,344	84.48%
No College Designated	47,230	43,288	91.65%
Grand Total	4,333,432	3,380,819	78.02%

### ATTEMPTED\_HRS

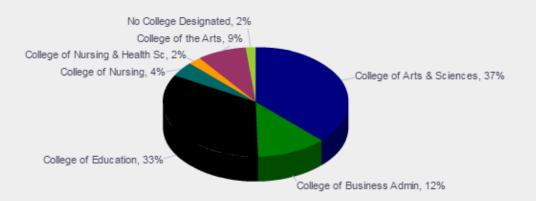


### **Earned Hours**

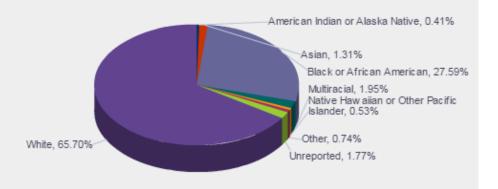


1,400K 1,230,541

### Students

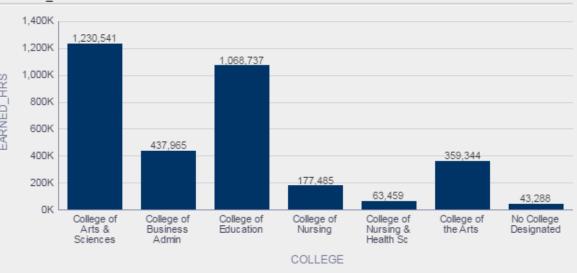


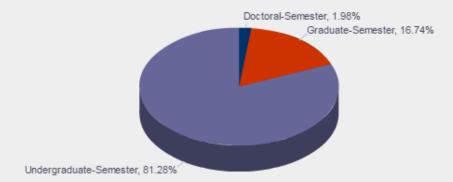
STUDENT\_COUNT



STUDENT\_COUNT





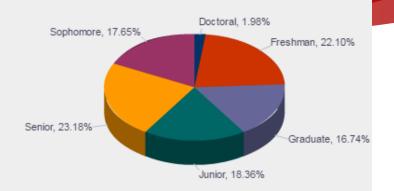


STUDENT\_COUNT

### STUDENT\_COUNT

4

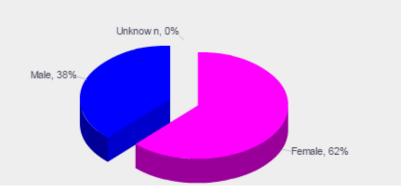
### STUDENT\_COUNT



STUDENT\_COUNT

4

### Students



Gender Trends by College Department Results Prompts Advanced Criteria િ ·O Ĵω ▶ % Major Dimension **Compound Layout** Minor Concentration Title ☐ Aid Eligible Gender Trends by College Department ■ CIPC Code Time run: 9/24/2014 11:28:53 AM ☐ Concentration Code ☐ Concentration Graph (2) Concentration Dimension Gender Student Count ▶ ☐ Gender Code 9,000 - Gender Gender Dimension 7,500 Race Student Count 6,000 ▶ B Race Code - Race Female 4,500 Male Race Dimension 3,000 🛅 Full-Time / Part-Time Student Level 1,500 Student Class Student Type Summer 2008 Summer 2006 Summer 2004 Spring Spring 2012 Spring 2010 Spring 2008 Spring 2006 Spring 2004 ∃ Student Type Code ∃ Student Type Student Type Dimension Term in Overall GPA Range Person ▶ ☐ Other E-mail ✓ Catalog

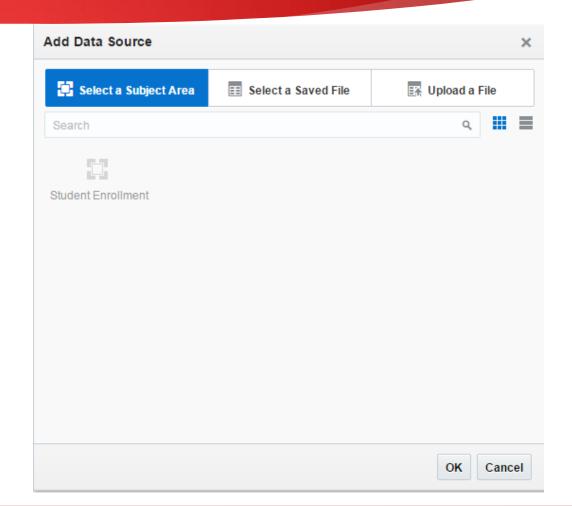
# Oracle BICS – Visual Analyzer

- ► Easily explore data and create visualizations
- Access all data sets loaded into your database
- ► Load and analyze data from spreadsheets
- ► Drag-n-Drop reporting

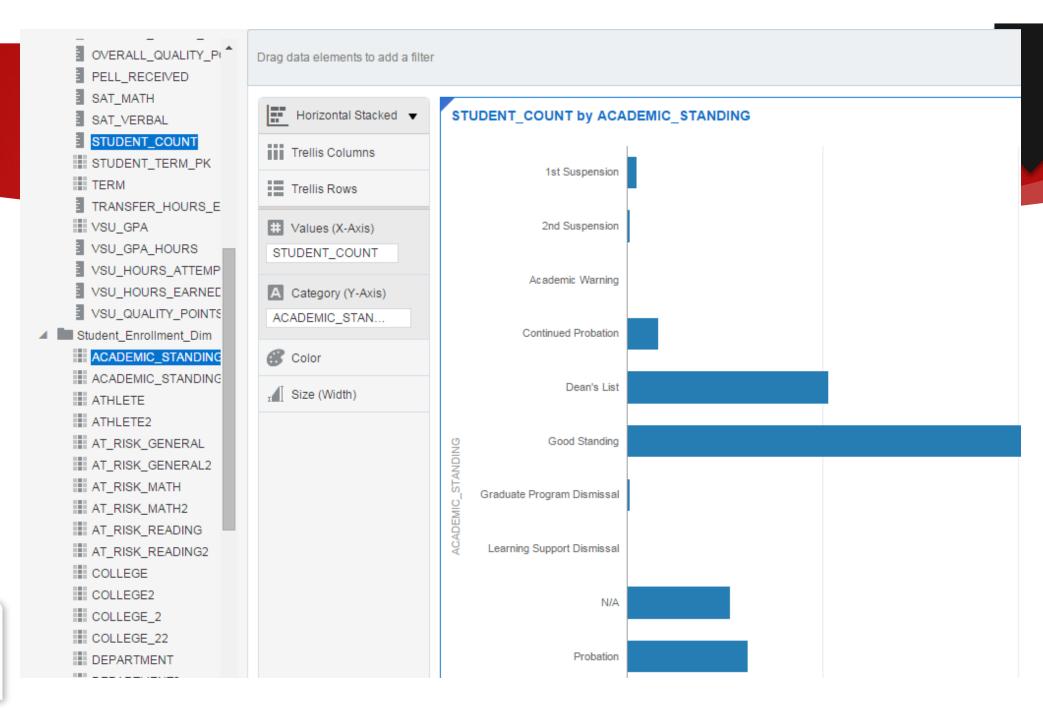


# Visual Analyzer – Data Source Selection

- Use internal data
- ▶ Select a saved file
- ▶ Upload a csv/excel file
- Combine internal and uploaded files in analysis

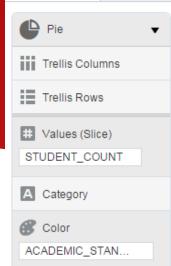




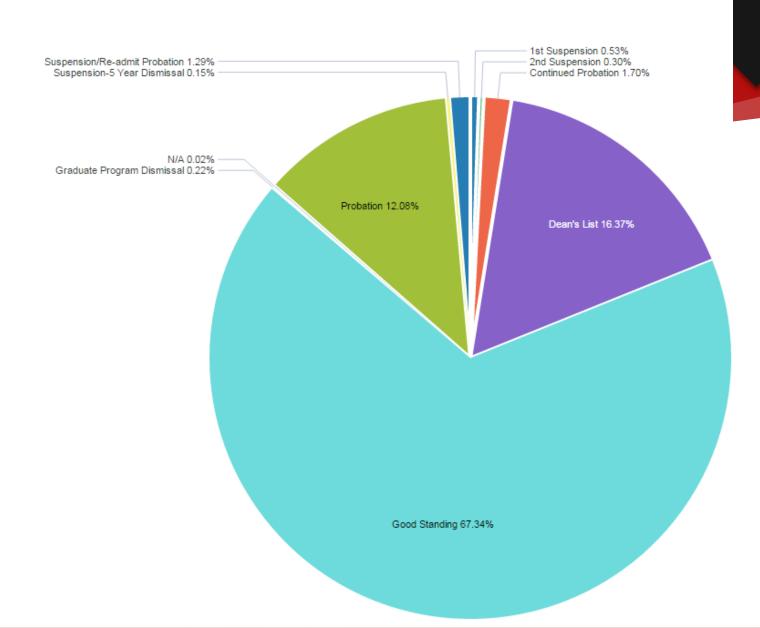




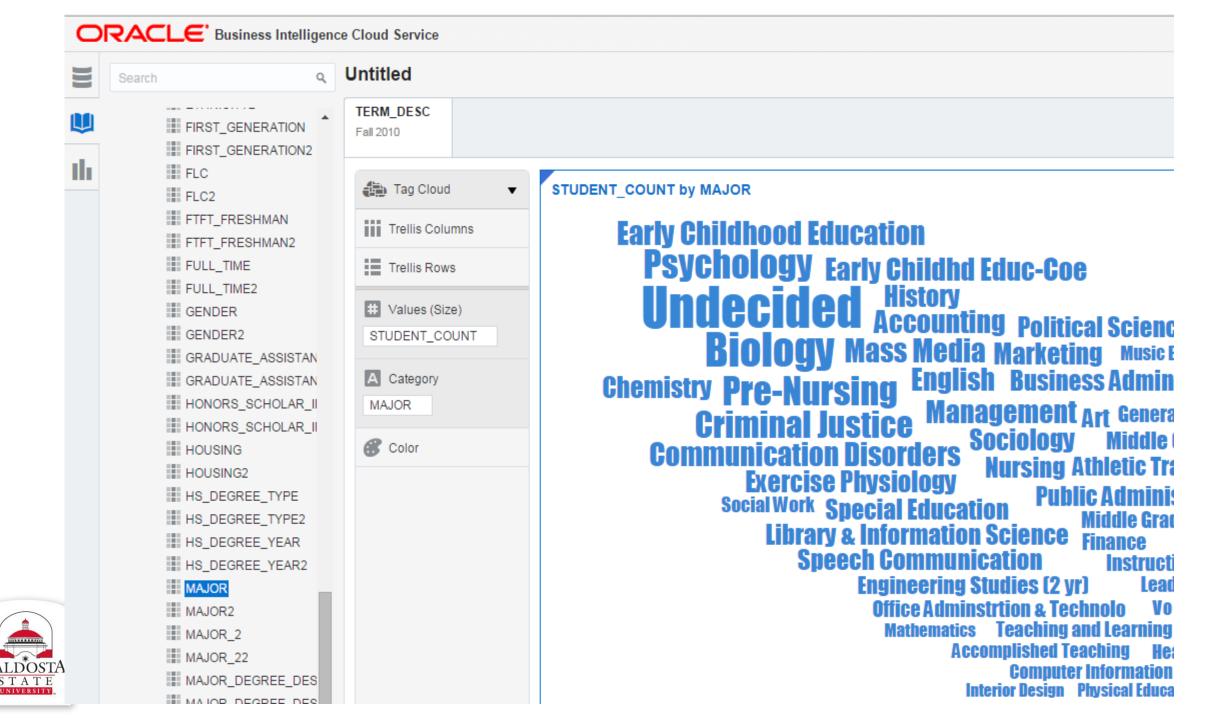


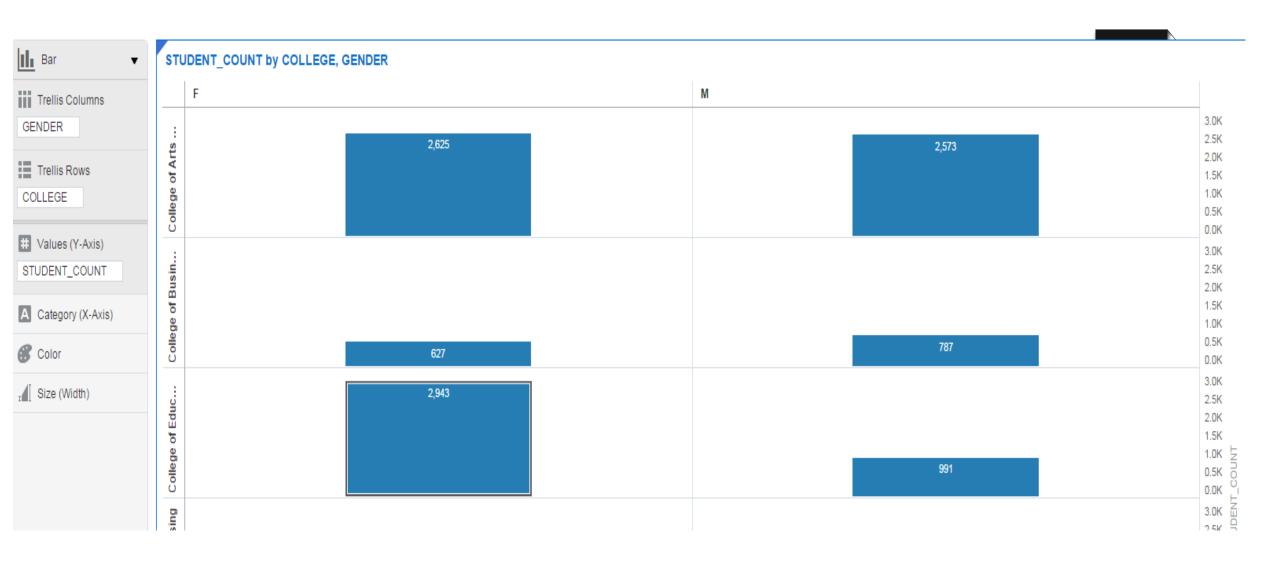






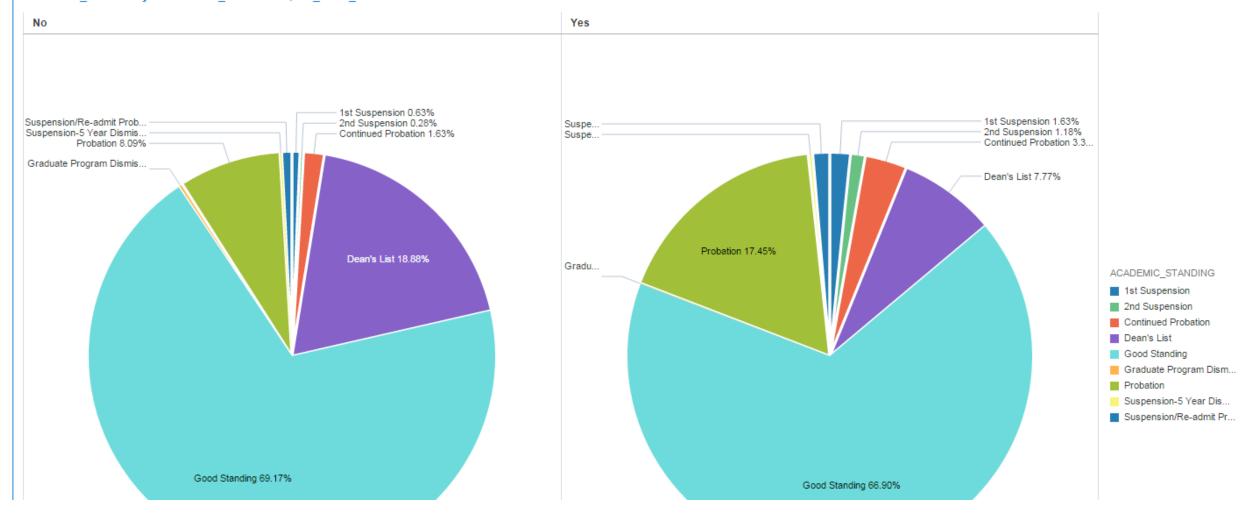








### STUDENT\_COUNT by ACADEMIC\_STANDING, AT\_RISK\_MATH





# 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 realtime prioritization to advertisements and messages



About VSU

Admissions

Academics

Student Life

Athletics

92 0

☐ July 9, 2013 | Message from your Advisor: Please contact me ASAP 229.333.1500 €



+ EXPAND



Math Tutoring 229.333.1500

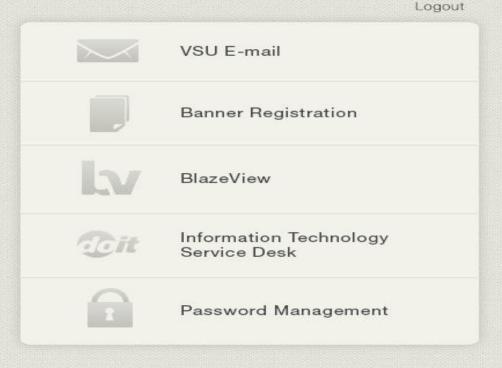
- Math Study Tips
- Tutoring Schedule
- Course Catalog
- · Choosing a Major





English Tutoring 229.333.1500

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# MyVSU Portal

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

## Registrar's Office



English Tutoring 229,333,1500

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

**Fall Registration** July 8 @ 7am



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## VALDOSTA STATE UNIVERSITY

MyVSU | A-Z Index | Maps | Make A Gift | Text

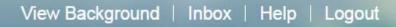
About VSU

Admissions

Academics

Campus Life Athletics

You have a new message. Click Here.





#### Valdosta Forecast

TODAY

-0-

66 | 87

65 | 88

65 | 82

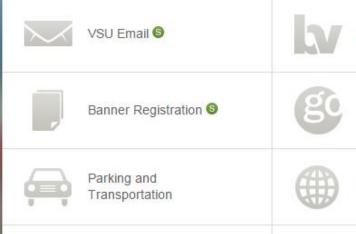
SAT



### Employee Development



Links



Orientation for Online Students



1Card Online Card Office

CampusConnect

BlazeVIEW D2L 8

GoVIEW

#### Presidents Newsletter





# **MyVSU Portal**

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



ADP/Shared Services





# **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**



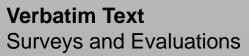


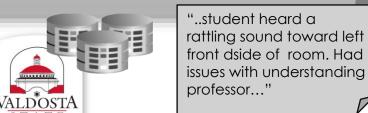
Data Warehouse / **Business Intelligence** Banner/ODS

PeopleSoft

One Card

Student Record									
	Clas ID	Sec	Da	Inst	Cours	Spend	Cost	ns	
12324		234	12/3	1233	Class1	\$300	\$200	ler	Price
12325	507		12/4		Class2	\$450	\$900	ler1	\$35,000
12020	507	233	12/4	1545	507	26  1545		aler2	\$22,000







## **Government Agencies** Bureau of Labor/Statistics INSLDS/FAFSA/IFAPS

**Websites Sports** Other HigherEd



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

Population ages,

- ".. Valdosta State wins another state championship..."
- " ... University of Georgia hires a new vice president."

## **Social Media**

Student Sentiment/Blogs/Tweets



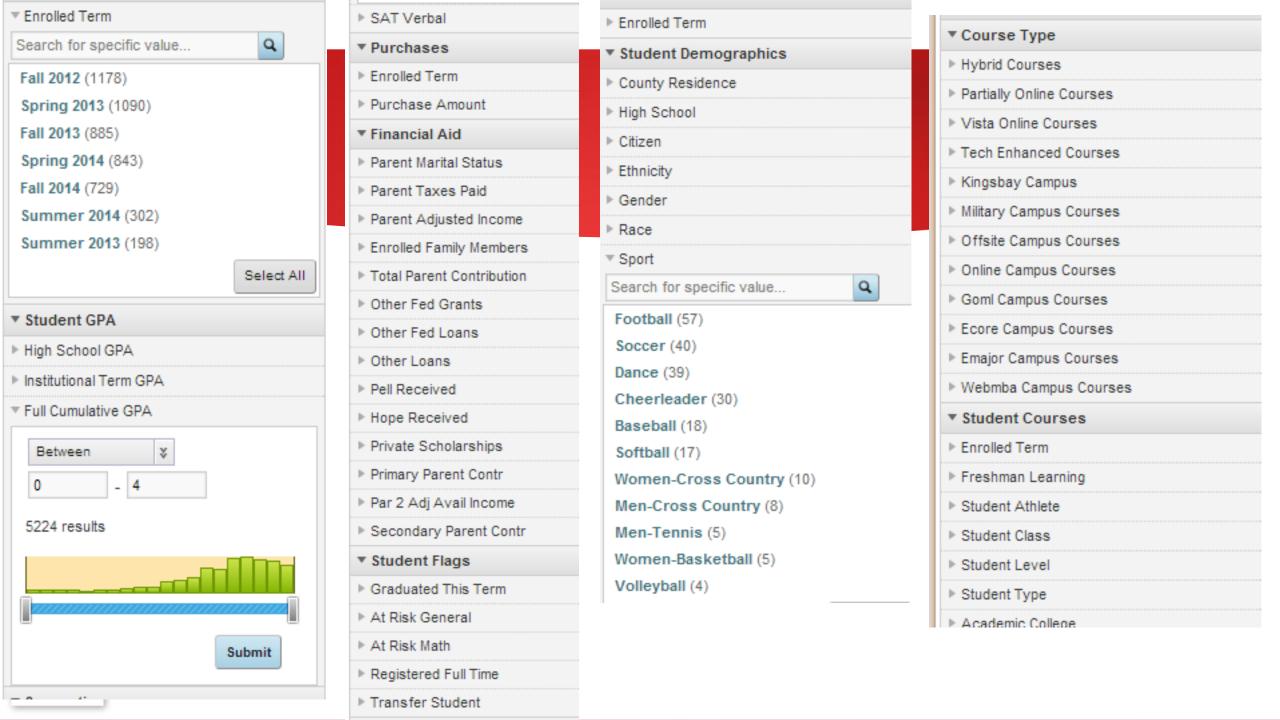


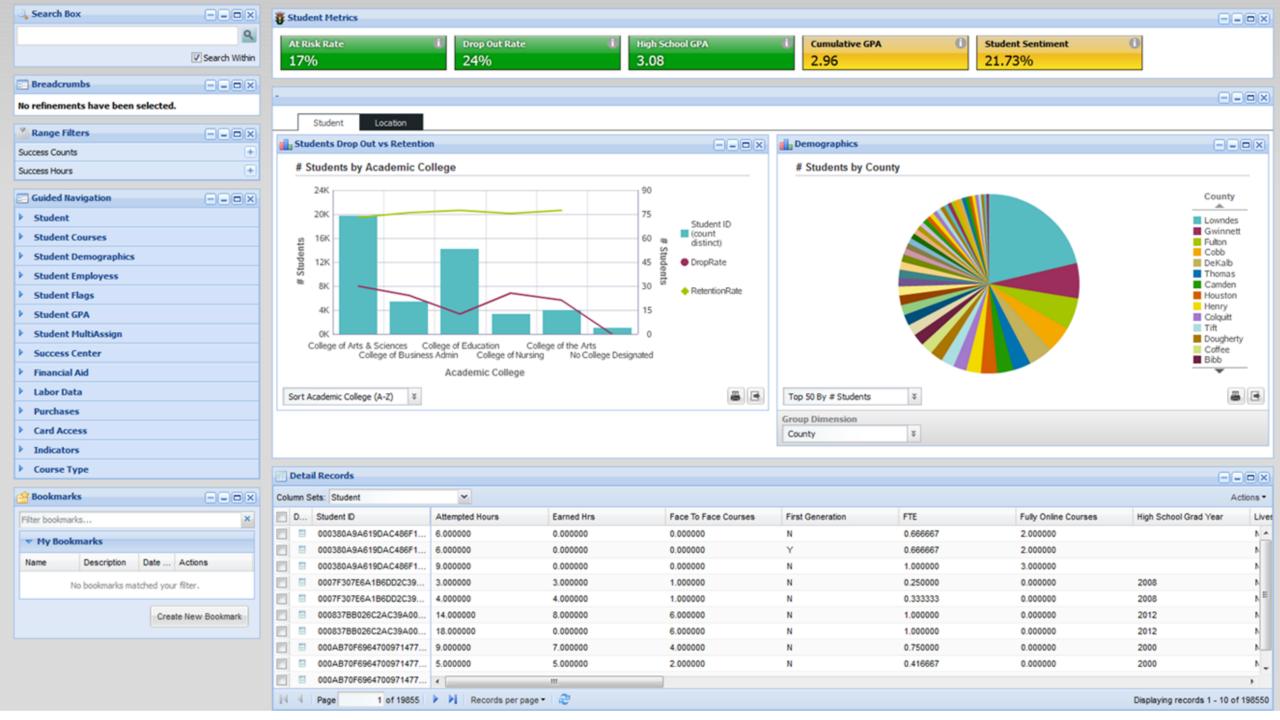


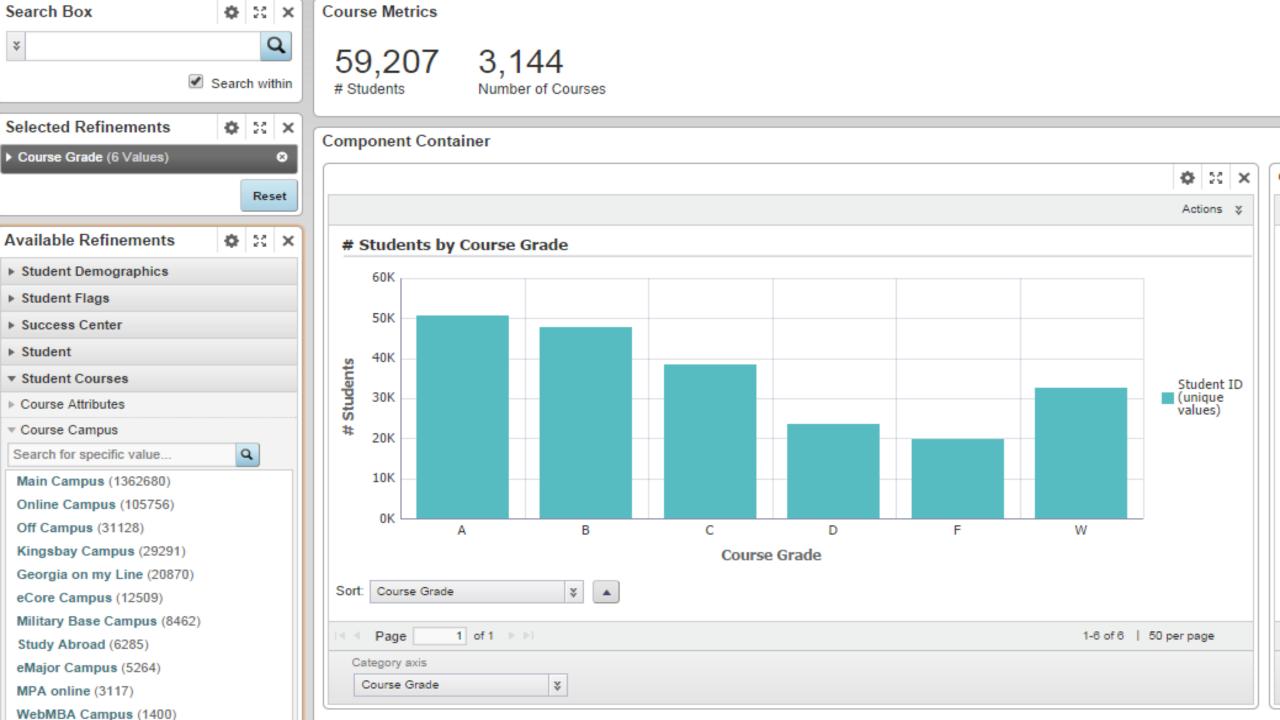
"Love Valdosta State University. The campus is in a great area. It is large enough to have everything you need, but still small enough....."

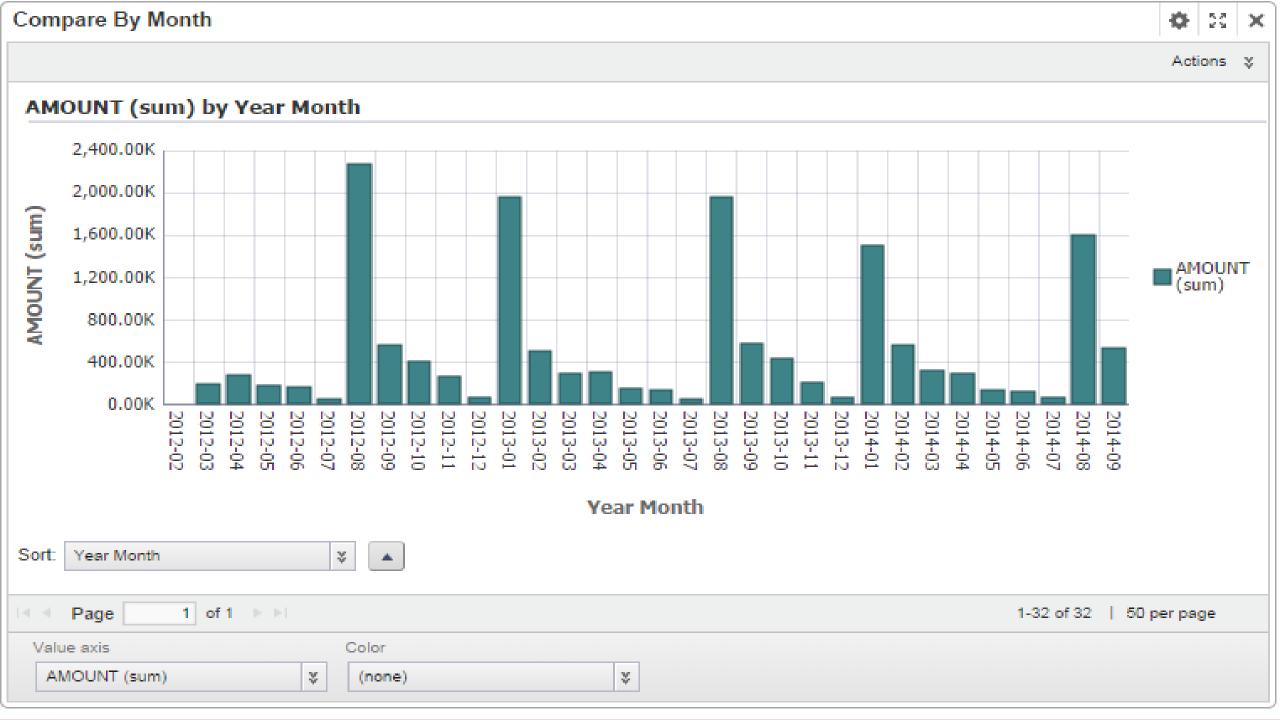












Purchase Metrics

14,603 # Students \$16,054,431

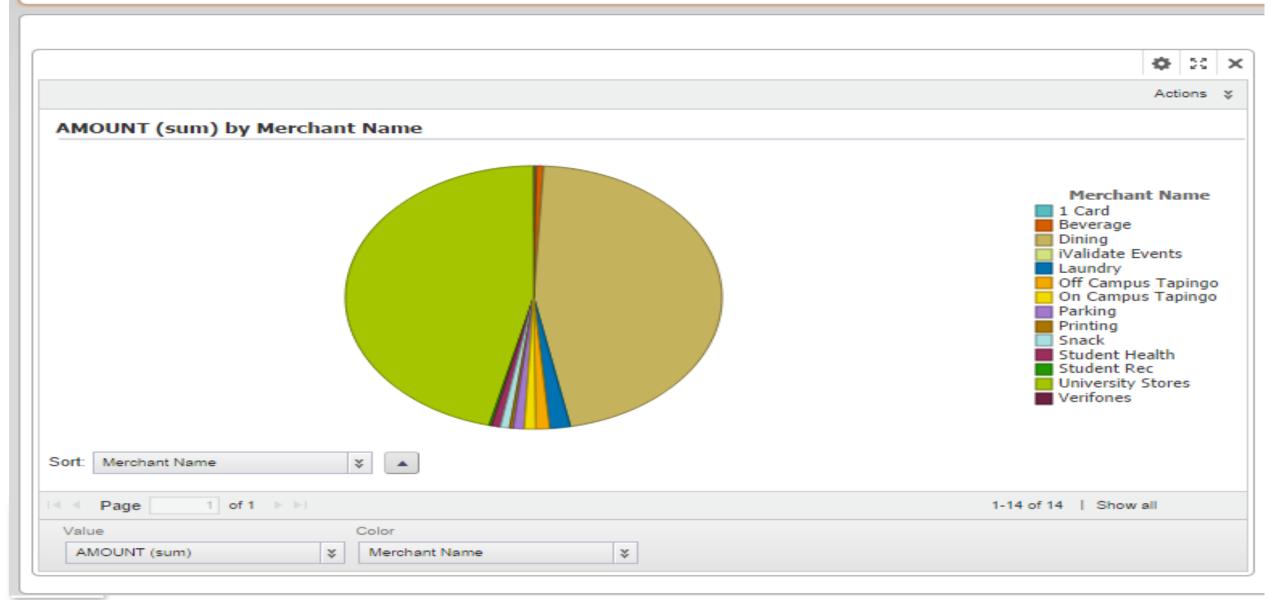
Total \$ Amount

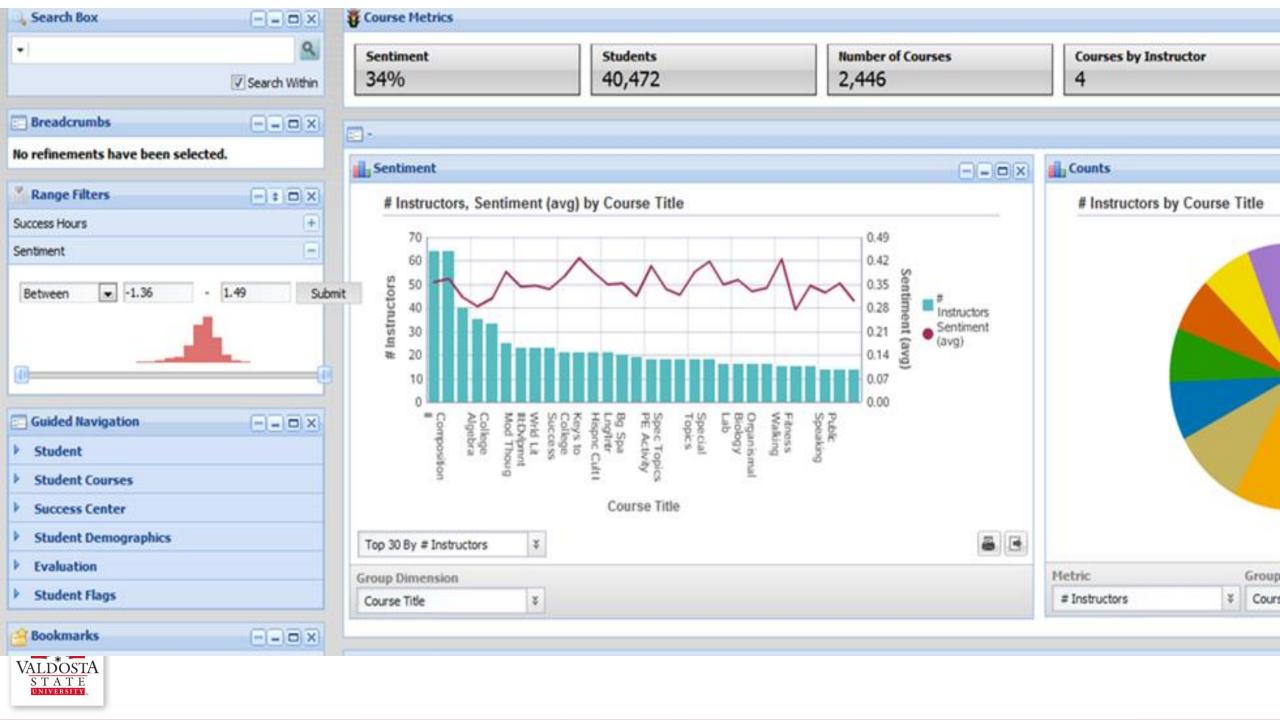
1,912,588 \$8.39

Total Transactions Avg \$ per Tra

Avg \$ per Transaction

2,035
Transactions Per Day





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

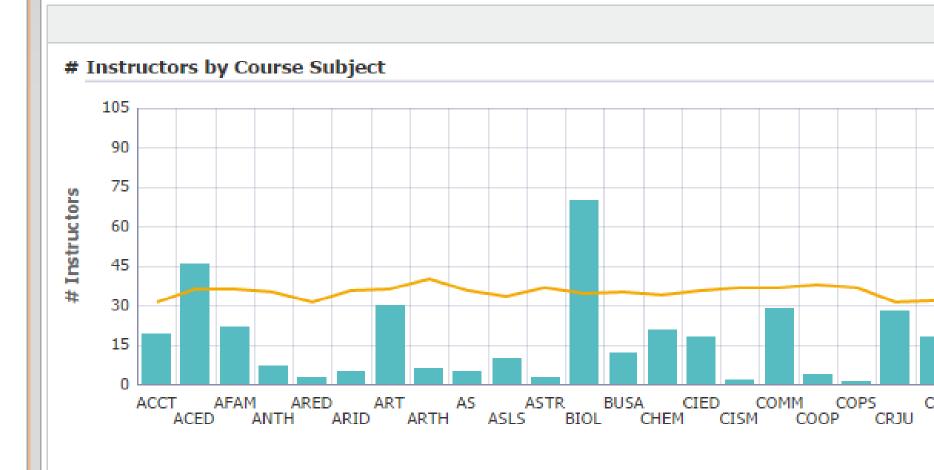


Explore Themes by Number of records



Sentiment

#### Chart



Sort: Course Subject 🗴

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# **Contact Information**

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