

## **Syllabus**

**Course Number: CIS 461**

**Course Title: Business Analytics**

### **Course Description:**

Introduces the role of business analytics in organizations. Explores practical methodologies, strategies, and best practices for performing descriptive, predictive, and prescriptive analytics. Students gain hands-on experience with SAP Business Analytics tools in a virtual lab environment.

### **Prerequisite Courses:**

MT 270 and CIS 445, CS 445 or CIS 313

### **Course Overview**

This course introduces the role of business analytics (BA) in organizations. Business analytics is defined as a process that involves the use of analysis techniques (graphs, distributions, means, regression), information systems software (database, data mining, data transformation and reporting packages), and business management practices (decision making, process management, data management) to explore, visualize, discover and communicate patterns or trends in data. BA involves an interactive and iterative process of analyzing and exploring enterprise and other external data to find valuable insights that can be exploited to achieve broad and deep understanding of and insights into markets, customers, operations, and resource management. Business analytics provides benefits throughout all major functional areas of an organization including strategy, product development, marketing, operations, customer service, and finance.

### **Course Outcomes:**

Upon completion of this course, learners should be able to:

- Explain key concepts and current practices related to business analytics in organizations
- Select and apply descriptive, predictive and/or prescriptive analytics based on business needs.
- Describe how to collect, model and manage data used for business analytics.
- Apply popular statistical techniques used in business analytics
- Utilize software tools to manage/process data that produces analytics outputs.
- Describe the project methodology used for business analytics projects.

- Analyze data to generate information and knowledge that lead to informed decisions for businesses
- Author enterprise dashboards that are used to summarize and visualize data in a way that supports insight into trends and “what-if” analysis in real time.
- Show how business intelligence can be derived from data warehouses
- Create standard reports for business users
- Derive insightful trends using data mining techniques
- Apply the latest in analytics technology in real world case studies in the areas of business, entertainment, climate change etc.

## Course Materials:

### *Required Texts:*

**Textbook:** Practical Analytics, 1<sup>st</sup> Edition 2015, *Nitin Kalé & Nancy Jones*, Epistemy Press (epistemypress.com)

ISBN: 978-0-9856008-9-1. Available for purchase here - <http://epistemypress.com/books/practical-analytics/>

### *Required Resources:*

American Psychological Association (current edition). APA Publication Manual. Retrieved from <http://www.apastyle.org/>.

### *Library Tutorials:*

Research Tutorials (n.d.). Regis University Library: see <http://libguides.regis.edu/tutorials>.

Computer and Information Science Research Tutorial, see

[https://mediaspace.regis.edu/media/Regis+Library+-+Resources+for+computer+and+information+science+/0\\_blk905nh/10579702](https://mediaspace.regis.edu/media/Regis+Library+-+Resources+for+computer+and+information+science+/0_blk905nh/10579702)

### *Technology Tools:*

Adobe Acrobat Reader

RealPlayer (to watch the video presentations)

### *Optional Materials:*

Purdue Online Writing Lab (OWL). Retrieved from

<https://owl.english.purdue.edu/owl/section/2/10/>.

## Pre-Assignment:

**Online Format:** Sign on to D2L (Home Page) and become familiar with the course navigation of the Web Curriculum. Read Chapters 1 & 2 of the textbook.

**Classroom-based Format:** Read Chapters 1 & 2 of the textbook.

**Pre-Assignment Due Dates:**

**Classroom-based Format:** This assignment is due the first night of class.

**Online Format:** The facilitator will specify the due date for this assignment.

Course Assignments and Activities:

	Topics	Readings	Activities Assignments and Associated Points
1	Introduction to Business Analytics Data Acquisition	Kale/Jones (2016) Chapters 1 & 2  Online Course: From the Expert	Class Discussions  Lab Exercise: SAP Business Objects Cloud - GBI Case Study
2	Dimensional Data Modeling Data Extraction, Transformation, and Loading	Kale/Jones (2016) Chapters 3 & 4  Online Course: From the Expert	Class Discussions  Lab Exercise: Tableau Visualization – Suicides in India Case study
3	Slicing and Dicing Reporting	Kale/Jones (2016) Chapter 5 & 6  Online Course: From the Expert	Class Discussions  Lab Exercise: Excel Pivot tables
4	Basic Visualizations	Kale/Jones (2016) Chapter 7  Online Course: From the Expert &	Class Discussions  Lab Exercise: SAP Crystal Reports using MS-Access database  Written Assignment: Business Analytics in Organizations  Quiz 1: Kale/Jones (2016) Chapters 1 – 7
5	Dashboards Advanced Visualizations	Kale/Jones (2016) Chapters 8 & 9  Online Course: From the Expert & Data Mining.pdf	Class Discussions  Lab Exercise: SAP Design Studio
6	Data Mining Descriptive Models for Data Mining	Kale/Jones (2016) Chapters 10 & 11  Online Course: From the Expert	Class Discussions  Lab Exercise: SAP Predictive Analytics Case Study Titanic
7	Forecasting and Predictive Models for Data Mining Big Data Analytics	Kale/Jones (2016) Chapter 12 & 13  Online Course: From the Expert	Class Discussions  SAP Predictive Analytics continued

<b>8</b>	Analytics in Practice Decision Support	Kale/Jones (2016) Chapter 14  Online Course: From the Expert:	Class Discussions  Final Exam  Quiz 2: Kale/Jones (2016) Chapters 8-14
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### Student Evaluation Grid:

Assignment	Value (percent of overall course grade)
Discussions/Participation	<b>20%</b>
SAP Lab Exercises	<b>40%</b>
Quizzes (2 @ 10% each)	<b>20%</b>
Written Assignment	<b>10%</b>
Final Exam	<b>10%</b>

### CC&IS Grading Scale:

Letter Grade	Percentage	Grade Point
A	93 to 100	4.00
A-	90 to less than 93	3.67
B+	87 to less than 90	3.33
B	83 to less than 87	3.00
B-	80 to less than 83	2.67
C+	77 to less than 80	2.33
C	73 to less than 77	2.00
C-	70 to less than 73	1.67
D+	67 to less than 70	1.33
D	63 to less than 67	1.00
D-	60 to less than 63	.67
F	Less than 60	0

Additional information about grading can be found in the latest edition of the University Catalog, available at <http://www.regis.edu/Academics/Course%20Catalog.aspx>.

## CC&IS Policies and Procedures

Each of the following CC&IS Policies & Procedures is incorporated here by reference. Students are expected to review this information each term, and agree to the policies and procedures as identified here and specified in the latest edition of the University Catalog, available at <http://www.regis.edu/Academics/Course%20Catalog.aspx> or at the link provided.

- The CC&IS Academic Integrity Policy.
- The Student Honor Code and Student Standards of Conduct.
- Incomplete Grade Policy, Pass / No Pass Grades, Grade Reports.
- The Information Privacy policy and FERPA. For more information regarding FERPA, visit the [U.S. Department of Education](http://www.ed.gov).
- The HIPAA policies for protected health information. The complete Regis University HIPAA Privacy & Security policy can be found here: <http://www.regis.edu/About-Regis-University/University-Offices-and-Services/Auxiliary-Business/HIPAA.aspx>.
- The Human Subjects Institutional Review Board (IRB) procedures. More information about the IRB and its processes can be found here: <http://regis.edu/Academics/Academic-Grants/Proposals/Regis-Information/IRB.aspx>.

The CC&IS Policies & Procedures Syllabus Addendum summarizes additional important policies including, Diversity, Equal Access, Disability Services, and Attendance & Participation that apply to every course offered by the College of Computer & Information Sciences at Regis University. A copy of the CC&IS Policies & Procedures Syllabus Addendum can be found here: <https://in2.regis.edu/sites/ccis/policies/Repository/CCIS%20Syllabus%20Addendum.docx>.