

Managing Business Intelligence: Preparing Project Facilitators Through a Graduate Degree Concentration

Russell Walker, PhD · Lynn Evans, PhD · Bhupinder S. Sran, PhD

Presented at Big Data & Analytics EdCon 2014 Las Vegas - October 26, 2014

About DeVry University







Long Beach campus

- Founded 1931
- More than 90 US locations and online
- Career-oriented grad and undergrad degrees in technology, science, business, and the arts

Business Intelligence and Analytics Management (BIAM)



- Graduate
 - MBA Concentration or Graduate Certificate
 - Prepares students for management roles in Bl/analytics projects
- Undergraduate
 - BSBA / BSM / BSTM Concentration
 - Prepares students for entry-level management support roles
- Understanding of themes, initiatives, and impacts
- Hands-on familiarity with methods and tools
- Breadth vs. depth
- First courses (graduate) offered March 2014



WHY DEVRY COLLEGES & DEGREE PROGRAMS College of Business & Management College of Engineering & Information Sciences

College of Engineering & Information Sciences College of Health Sciences College of Liberal Arts & Sciences College of Media Arts &

Technology
Programs by Location
Associate Degree Programs
Bachelor's Degree Programs
Master's Degree Programs

OCATIONS
ONLINE OPTIONS
FINANCIAL AID & TUITION
ADMISSIONS
CAREER SERVICES

OUR BLOG

College of Business & Management

About

Career Opportunities

Business Intelligence and Analytics Management Specialization

As data floods the workplace, defining businesses and determining success, there's an increasing demand for prepared individuals with the right business intelligence management skills who can make effective use of analytic tools and manage, oversee and evaluate business intelligence. In fact, job openings in specialized technology, which include business intelligence analysis, are expected to grow by 30% between 2008 and 2018. With a Business intelligence and Analytics Management specialization, you'll be prepared to succeed in growing careers related to data management, strategy, analysis, development and administration.

Follow a career track in Business Intelligence and Analytics Management by choosing this specialization when you earn one of the following bachelor's degrees from DeVry University in:

- Business Administration
- Management
- · Technical Management

Learn more about DeVry's <u>Business Intelligence and Analytics Management degree</u> specialization online.

MBA Program Objectives



Principles	Demonstrate an in-depth knowledge of the principles of accounting and finance, marketing management, leadership and organizational behavior, and business economics in various management situations in a global economy.
Communication	Demonstrate quality corporate level oral and written communication skills through written reports, research projects, business plans, and oral presentations.
Analysis	Conduct quantitative and qualitative business analyses, choose legal and ethical courses of action, and use appropriate software applications to develop alternative solutions, evaluate outcomes and make recommendations for effective business decisions.
Collaboration	Demonstrate effective collaboration with diverse populations in multiple settings.

BIAM Concentration Objectives



Tools	Identify and evaluate based on relative strengths and weaknesses the appropriate analytical tools needed to solve multi-functional business problems.
Translation	Act as a translator by formulating an explanation of the results of a business intelligence project that is understandable by the business function expert and agreeable to the analyst.
Impacts	Assess the organizational impact of applying business intelligence techniques to an organization's problems and suggest approaches to maximize the benefits and minimize the costs.
Strategy	Support senior level mangers in understanding the strategic implications of applying the techniques of business intelligence to their organization.

Skill Sets and Topics



Business Intelligence (ability to use the items below)

Business **Analytics** (model, predict, optimize)

Business Knowledge (ability to know the past)

Business Analysis (analyze current processes)

Statistical Inference Management Science/Operations Research Stochastic Processes Regression and Time Series Analysis Social Network Analysis Complex Event Processing Data Mining/OLAP

Relational Database Management Systems Big Data (e.g. Hadoop) **NoSQL Options** Data Warehousing/Data Marts Social Data (blogs, emails, tweets, GPS, etc.)

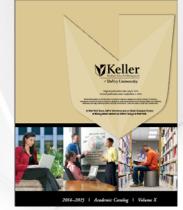
SWOT Business Process Improvement Requirements Gathering and Analysis **Business Activity** Monitoring **Business Case Preparation** Systems Development Life Cycle/Agile Methods Project Management

Curriculum



- Program Core (15 ch)
 - Accounting & Finance
 - Statistics
 - Leadership & Org. Behavior
 - MIS
 - Marketing
- Program-Specific (15 ch)
 - Managerial Accounting
 - Economics
 - Managerial Finance
 - Business Law
 - Business Planning Seminar (Capstone)

- BIAM Concentration (12 ch)
 - Applications of Business Analytics I & II
 - Any 2 other BIAM courses
- General Electives (6 ch)
 - Any 2 courses with prereqs met



Courses



BIAM500	Applications of Business Analytics I
BIAM510	Applications of Business Analytics II
BIAM530	Developing & Managing Databases for Business Intelligence
BIAM540	Internet Analytics Strategies
BIAM560	Predictive Analytics
BIAM570	Modeling for Decision-Making
GSCM520	Foundations in Global Supply Chain Management

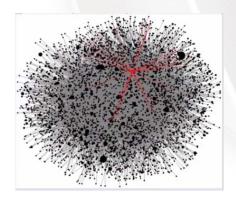


Business Analytics



- Teaching Strategies
 - Video-based labs
 - Case studies
- Tools
 - GUI
 - Open source
 - Excel add-ins (e.g. NodeXL)
 - R: Rattle, R Commander, R **Studio**
 - MongoDB: RoboMongo

- Challenges
 - Student time requirements
 - Big picture focus
 - Technical hurdles with centralized lab environment
- Student Reactions
 - "Tough but worth it"
 - Immediately applicable



Internet Analytics



Teaching Strategies

- Online discussions
- Labs with clickstream analytics
- Course project: Implementing a measurement plan

Technologies

- Demo versions of analytical tools
- Internally developed web analytics simulator (Google Analytics-based)

Challenges

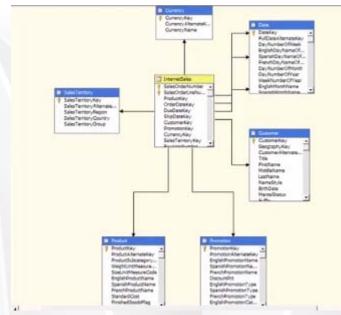
- Suitable textbooks
- Access to tools and realistic data sets
- Constant tool changes



Database Management and Development



- Teaching Strategies
 - Case studies
 - Lab assignments
- Tools
 - Microsoft Visio
 - Microsoft Access
 - Microsoft SQL Server
 - Management Studio
 - Analysis Services
 - Business Intelligence Development Studio
 - AdventureWorks demo databases
- Challenges
 - Accessibility to students with varying backgrounds
 - Balance between business and technology



Contact Information / Q&A



- Contact me: Russell Walker, PhD rwalker2@devry.edu
 - in https://www.linkedin.com/in/profwalker
 - ✓ @russwalker58
- BIAM at DeVry University/Keller Graduate School of Management
 - http://www.devry.edu/degree-programs/college-businessmanagement/business-intelligence-and-analytics-about.html
 - http://www.keller.edu/graduate-degree-programs/mba-program/businessintelligence-mba.html
- This presentation: https://sites.google.com/site/russwalker58/managing-bi
- Questions?

What is Analytics Report Finder (ARF)



- ARF is a web analytics tool simulator.
- It simulates the Google Analytics (GA) interface.
- It was developed by DeVry University to support a graduate course in Internet analytics strategies.
- Students can interact with ARF to find predefined (PDF) reports.
- Focuses on working with reports only. No admin features.





Google Analytics (GA)

+Dashboard Google Analytics -Audience May 10, 2014 Overview **Audience Overview** Location New vs Returning All Sessions Frequency Recency Engagement - Duration Overview Engagement - Depth Browser Operating System Mobile - Overview Mobile - Devices User Flow +Acquisition +Behavior +Conversions May 13 May 14 May 15 May 16 ■ New Visitor ■ Returning Vis Users Pageviews Sessions 396 280 1,744 Pages / Session Avg. Session Duration Bounce Rate Google and the Google logo are registered trademarks of Google Inc., used with permission. Data for reports from metricagroup.com, used with permission of Metrica group.

Analytics Report Finder (ARF)

Analytics Report Finder (ARF)



Strengths

- Interface and report formats do not change over time. This makes it easier to coordinate with weekly notes and assignments.
- It is interactive.
- Based on real data for metricagroup.com.
- Great tool for working with analytics reports and learning to work with GA reports.
- Many features are similar to GA
 - Report menu on left
 - Same report format
 - Can expand menu
 - Similar "feel"

Limitations

- Limited functionality.
 - Standard predefined reports only.
 - Predetermined report dates.
 - No admin rights.
 - Limited segmentation of data (All users or Mobile/Tablet users only).
 - Not all reports are included
- Interface and report formats do not change to reflect changes in the design of GA.

ARF Demonstration



Click for **Demo**