

Business Analytics (BUAN)

BUAN 125 Foundations in Business Data Analytics 3 Credits (3,0)

Concepts of spreadsheet-based data manipulation and analysis for business applications; creating, formatting, and working with formulas, functions, and charts; PivotTables, macros, advanced features; application of what-if analysis, sensitivity analysis, goal seeking, power pivot, and basic linear optimization modeling for management purposes.

Course Offered at: Daytona Beach

BUAN 199 Special Topics in Business Analytics 1-6 Credit (1-6,0)

Individual, independent, or directed studies of selected topics in business analytics.

Course Offered at: Daytona Beach, Prescott

BUAN 222 Business Analytics Tools 3 Credits (3,0)

Advanced spreadsheet analysis techniques including complex data sets, error troubleshooting, worksheet collaboration, and software information sharing; introduction to project management including planning, scheduling, cost and task tracking using computer software; experience in content and document management, and collaboration through customized web portals.

Course Offered at: Prescott

BUAN 232 Techniques in Business Analytics 3 Credits (3,0)

Descriptive analytics using computational tools and languages to manage large data sets for managerial purposes; structured query language for data retrieval from relational databases; statistical programming languages for data combination, reshaping, transformation, and aggregation to produce concise summaries, figures, and charts for business decision-making.

Prerequisites: BUAN 125 or CPSC 120

Course Offered at: Daytona Beach

BUAN 299 Special Topics in Business Analytics 1-6 Credit (1-6,0)

Individual, independent, or directed studies of selected topics in business analytics.

Course Offered at: Daytona Beach, Prescott

BUAN 301 Evidence-Based Management: The Need for Data 3 Credits (3,0)

Theories of Evidence-Based Management (EBM) and the importance of data-driven decisions; exploration of publicly available data sets to address working hypotheses; bridging existing data sets to form new data relationships; exposure to consumer, economic, demographic, sales, and other data types used in business decisions with prescriptive analytics; the scientific method and role of quantitative and qualitative analysis in generating business intelligence.

Prerequisites: MMIS 320 and CPSC 123

Course Offered at: Worldwide, Asia

BUAN 302 Communication and Ethics in Data Analysis 3 Credits (3,0)

Best practices in data ethics and communication; understanding ethics in the use of data and its role in communicating results; exploration of common pitfalls in data presentation; analysis of recent cases involving communication and ethical challenges.

Prerequisites: BUAN 301

Course Offered at: Worldwide, Asia

BUAN 303 Data-driven Managerial Decision Making 3 Credits (3,0)

Data-driven business analysis for managers; fundamental statistical and decision analysis applied to business problems; implementation on spreadsheet-based platforms; foundation for business analytics courses.

Prerequisites: BUAN 222 and STAT 222

Course Offered at: Prescott

BUAN 304 Advanced Statistics and Analytics Concepts 3 Credits (3,0)

Focus on mathematical models, simulation models, and forecasting tools for working with big data in an applied business format; data cleansing concepts; preparation for analysis; selection of appropriate methods based on data structure; use of the SAS suite of products for hands-on data cleansing, model building, and forecasting.

Prerequisites: BUAN 301 and BUAN 352

Course Offered at: Worldwide, Asia

BUAN 352 Business Analytics for Decision Making 3 Credits (3,0)

Practical skills for decision analytics; development, implementation, and utilization of managerial decision-making models in business; application of various prescriptive analytics techniques for driving optimal business decisions based on a variety of data types.

Daytona Beach Prerequisites: BUAN 222 or BUAN 232 and STAT 222

Prescott Prerequisites: BUAN 222 or BUAN 232 and STAT 222

Worldwide Prerequisites: STAT 211 or STAT 222

Course Offered at: Daytona Beach, Prescott, Worldwide, Asia

BUAN 370 Machine Learning and Big Data 3 Credits (3,0)

Overview of machine learning techniques to explore, analyze, and leverage big data; tools and algorithms to create machine learning models that learn from data and scale those models to big data problems; recent applications of machine learning in robotic control, data mining, and autonomous navigation; problem-based course for students to work as a team on real-world scenarios.

Prerequisites: BUAN 352

Course Offered at: Prescott

BUAN 399 Special Topics in Business Analytics 1-6 Credit (1-6,0)

Individual, independent, or directed studies of selected topics in business analytics.

Course Offered at: Daytona Beach, Prescott, Worldwide

BUAN 405 Applied Analytics I -- Descriptive Analytics 3 Credits (3,0)

Descriptive analysis of large data sets to test hypotheses; introduction to sentiment analysis for managing qualitative data; live data dashboards as an integrative bridge between descriptive analytics and data presentation; complete analysis models built and tested using various data sets and the SAS suite of products.

Prerequisites: BUAN 304

Course Offered at: Worldwide, Asia

BUAN 406 Applied Analytics II -- Predictive Analytics 3 Credits (3,0)

Use of SAS suite products for predictions and forecasting from large data sets; understanding predictive nodes of SAS products including neural networks, regression models, and other predictive concepts; application of models to data sets and interpretation of model comparison output; use of compiled and/or interpreted coding languages to build predictive applications.

Prerequisites: BUAN 405

Course Offered at: Worldwide, Asia

BUAN 407 Business Intelligence in Industry Capstone 3 Credits (3,0)

Culminating analytics project encompassing the entire problem-solving process from data sourcing to results presentation using data visualizations; report-out to an executive audience including decision recommendations; introduction to business intelligence concepts in the aviation industry; exposure to marketing metrics, psychometrics, and use of big data in everyday operations.

Prerequisites: BUAN 406

Course Offered at: Worldwide, Asia

BUAN 428 Business Analytics and Data Intelligence 3 Credits (3,0)

Introduction to how businesses use applications and technologies to manage, analyze, and distribute enterprise data; focus on analyzing and making sense of structured and unstructured data to support decision-making, improve operational efficiencies, reduce costs, increase revenue, and mitigate risks.

Prerequisites: MMIS 320

Course Offered at: Worldwide, Asia

BUAN 499 Special Topics in Business Analytics 1-6 Credit (1-6,0)

Individual, independent, or directed studies of selected topics in business analytics

Course Offered at: Daytona Beach, Prescott, Worldwide