

Truly Global Focus. Truly Global Delivery.

Executive Certificate in Business Analytics

The role of data across organizations and industries is expanding: 85 percent of Fortune 500 companies have Big Data initiatives underway or in the planning stages. That means career opportunities and job growth for data analysts are booming and will remain strong for the foreseeable future. Thunderbird's online Business Analytics Certificate Program delivers instruction from the top-ranked departments of Information Systems and Supply Chain Management in Arizona State University's W. P. Carey School of Business to give you the skills and knowledge to advance your career in this exciting, growing field.

BUSINESS ANALYTICS & STRATEGY

- Define and analyze transformation processes available for producing and delivering products and services.
- Evaluate three of the most common methods of forecasting and choose which strategy is best given market conditions.
- Calculate the capacity/resource requirements and the resulting time to deliver a product/service for given demand levels and uncertainties.
- Explain why inventory exists and determine appropriate inventory management policies.

ENTERPRISE ANALYTICS & BIG DATA

- Practice evidence-based management Implement programs to ensure data quality.
- Present data in a manner that is understandable to nontechnical managers.
- Build and query relational databases; Build and query dimensional databases.
- Implement programs to ensure data quality.

DATA MINING & PREDICTIVE ANALYTICS

- Develop a practical, business-focused understanding of the three different orientations to data mining: exploratory, predictive and forensic.
- Establish an operational (hands-on) understanding of data-driven decision making.
- Understand the drivers and determinants of disruptive innovation and how best to leverage data mining.

Although the topics covered go into considerable depth, you do not need prior IT or analytics modeling knowledge or experience to apply for this certificate program.

CERTIFICATE DETAILS

Get a world-class global education.
Anytime, anywhere.

TUITION COST (USD)

\$1,980 per course
\$4,752 per 3-course track (a 20% savings)
Corporate pricing available for groups of three or more.

COURSE CREDIT

3 Continuing Education Units per course
9 Continuing Education Units per executive certificate

VIEW THE DEMO

Experience the certificate programs at:
online.thunderbird.edu/demo

ENGAGING INSTRUCTIONAL DELIVERY

The certificate is enhanced by weekly quizzes and readings, and a final overall assignment is due at the end of the course. Coursework can be completed on your time throughout the week, with all work being due by Sunday evenings.

Comprehensive curriculum. Quality instruction.

WHY THUNDERBIRD ONLINE

World-class continuing education from Thunderbird, the world's #1 ranked school in international business. Professional development on your schedule with 100% online content. Access to the highest quality academic experience with no related travel expense.

CERTIFICATE FACULTY

Thunderbird's faculty are recognized for their innovative teaching methods, global best business practices, ground-breaking research and commentary, and viewpoints on all aspects of international business.

ENHANCE YOUR GLOBAL SKILL SET

Thunderbird Online's facilitated professional development programs are designed for busy professionals around the globe including:

🌐 WORKING PROFESSIONALS:

Improve your marketability in today's competitive global marketplace

🌐 EXPERIENCED EXECUTIVES:

Further expand your knowledge in a specific global business focus area

🌐 POTENTIAL DEGREE CANDIDATES:

Get a sample of the top-ranked Thunderbird degree curriculum



CERTIFICATE FORMAT

Each 8-week online course consists of:

- 2 - 3 hours of content per week
- Video lectures & podcasts
- Case studies & vignettes
- Interactive, multimedia activities
- Quizzes & checkpoint questions
- Facilitated discussion forums
- Global networking opportunities
- End-of-course assessment

PARTICIPANT TESTIMONIAL

"I chose a Thunderbird Online certificate because of the quality and structure of the courses. The material and information have immediate applicability to my job. The online learning programs allow me the flexibility to do the work according to my schedule within the week. I have been very impressed by the quality instruction and the structure of the online classes."

Certificate Format



Coursework and learning objectives:

Each weekly course segment clearly indicates the week's specific learning objectives, interactive activities, video lectures, and case studies.



Lecture capture software:

Thunderbird faculty lectures and presentations reinforce your weekly learning material.



Interactive multimedia activities:

Interactive activities are designed to provide you with a hands-on approach to strengthen your understanding of the course material.



Case studies:

Intensive case analyses enable you to apply the concepts learned to real-life examples.



Facilitated discussion boards:

Forums are facilitated by subject matter experts and are designed to promote discussion with your fellow global business professionals.



Quizzes and assessments: Online quizzes and checkpoint questions help to determine your understanding of the course material.

ABOUT THUNDERBIRD

Thunderbird is the world's #1 ranked school of international business with nearly 70 years of experience developing leaders with the global mindset, business skills, and social responsibility necessary to create real, sustainable value for organizations, communities, and the world. Learn more: www.thunderbird.edu



A unit of the Arizona State University Knowledge Enterprise

Syllabus Course 1: Business Analytics & Strategy

Overview of Business Analytics & Strategy

This course provides a survey of concepts, structure and analytical tools that are the foundation for organizing quantitative data and employing quantitative models to get insights that help you make better decisions. The primary objective of the course is to familiarize you with a range of fundamental quantitative models that have proven useful to analysts and decision makers.

- Evaluate three of the most common methods of forecasting and choose which strategy is best given market conditions.
- Define and analyze transformation processes available for producing and delivering products and services.
- Calculate the capacity/resource requirements and the resulting time to deliver a product/service for given demand levels and uncertainties.
- Explain why inventory exists and determine appropriate inventory management policies.
- Identify and discuss key decisions in the core activities of purchasing and logistics management.

Module 1: Business Intelligence Overview

- Understand the basic Business Intelligence terminology
- Understand BI values and capabilities
- Explain BI process and system – components, technologies, and applications
- Differentiate BI tools, products, industry and market
- Understand the directions in which Business Intelligence (BI) is evolving up-to-date
- Develop a general framework for decision support within organizations

Module 2: Real-Time Business Intelligence (BI)

- Understand what classes of problems can be tackled by BI
- Differentiate, design and assess various (BI)
- Learn real-world business intelligence examples across different industries
- Identify and translate business problems into BI and data mining problems.
- Implement efficient BI strategies to solve these problems.
- Enhance knowledge and skills in the current trends in the management and use of BI.

Module 3: Data Mining Concepts

- Understand the concepts, strategies, and methodologies related to the design and construction of data mining
- Comprehend several data preprocessing methods
- Understand Descriptive analysis: quantitative and qualitative
- Understand Predictive analytics: classification and regression
- Obtain knowledge of current data mining applications
- Illustrative examples of real-world applications

Module 4: Customer Relation Management

- Understand the foundation for CRM, and the meaning of “creating value” for customers
- Identify the key elements of implementing a CRM strategy consistent with the changing legal and ethical parameters in business
- Explain how to transform data into customer knowledge (developing the desired customer profile)
- Understand the measurement of consumer life time value
- Familiarize with data mining and strategic uses of information
- Exposure to important companies with innovative CRM strategies

Syllabus Course 2: Enterprise Analytics & Big Data

Overview of Enterprise Analytics & Big Data

This course explores how to assess what data resources are available to an organization and the quality of those resources. It also examines how to push these resources to decision makers, and how to help decision makers appropriately interpret/use the data.

- Implement programs to ensure data quality.
- Implement programs to extract, transform and load analytical databases.
- Build and query relational databases.
- Build and query dimensional databases.
- Present data in a manner that is understandable to nontechnical managers.
- Practice evidence-based management

Module 1: Management Information Systems and Data Quality

- Read and construct data models
- Understand the importance of data quality, maintain the data integrity overtime
- Determine solutions for poor data quality
- Understand the strength and failure of file processing system
- Identify and enforce business rules, domain constraints

Module 2: Relational and Dimensional Data Modules

- Understand the weakness of ER modeling
- Understand the strength of Dimensional modeling
- Differentiate between various database modeling
- Gain the skill to structure organizational data

Module 3: Self-Service Business Intelligence

- Build hands-on experience with Dimensional Data-Marts
- Develop the skills to construct and query
- Understand self-service business intelligence
- Gain the skill to develop a plan for converting data to knowledge to results within their organization

Module 4: Key Performance Indicators & Big Data

- Recognize and understand the key performance indicators
- Differentiate descriptive, predictive, prescriptive analysis
- Understand the basics of big data, and how to apply big data analytics across a variety of fields
- Understand the elements of data-mining

Syllabus Course 3: Data Mining & Predictive Analytics

Overview of Data Mining & Predictive Analytics

This course is an introduction to the practice of data mining and predictive modeling. We will study the fundamental principles and techniques of data mining and examine real-world examples and data to place data-mining techniques in context to develop data-analytic thinking.

- Learn how data mining changes the innovation equation in organizations.
- Understand the drivers and determinants of disruptive innovation and how best to leverage data mining.
- Develop a practical, business-focused understanding of the three different orientations to data mining: exploratory, predictive and forensic.
- Establish an operational (hands-on) understanding of data-driven decision making, using data mining tools and techniques to assist managers to take one of three (exploratory, predictive, forensic) perspectives to data.
- Understand how to develop new business opportunities or drive innovation in organizations by leveraging data mining.

Module 1: Data Mining Overview

- Understand the basic data mining concepts and terminology
- Understand where data mining fits alongside traditional business intelligence in the overall continuum of data-driven insights
- Understand how data mining is applied to various classes of business problems
- Understand the direction in which data mining is evolving
- Know the types of technologies used for data mining
- Understand the issues and challenges that come with data mining

Module 2: Data Mining with Traditional Tools and Technologies

- Explain several traditional architectural alternatives used to implement data mining
- Architect a high-level data mining solution using traditional technologies such as data warehousing and statistical software packages
- Understand various data mining applications using traditional tools and technologies

Module 3: Data Mining with Big Data and Advanced Analytics

- Understand the impact of modern big data to bring greatly expanded value to traditional data mining
- Identify the changes in predictive analytics and descriptive analytics as a result of extremely large volumes of data
- Architect a high-level data mining solution using big data technologies
- Explain examples of real-world applications using big data and data mining
- Build a roadmap to world-class data mining capabilities

Module 4: Bringing World-class Data Mining to your Organization

- Assess how well your organization is using data mining techniques and technologies today
- Understand the business value of an organization with world-class data mining
- Understand roles and responsibilities of data scientists
- Infuse data mining analytics into business processes and workflows
- Build a roadmap from your organization's current data-driven insights to your next generation of data mining capabilities