Northern Illinois University-Ann Dzuranin

Senior Level Course: Data Analytics in Accounting

Course Overview:
Organizations create and collect massive amounts of data as result of their day-to-day operations. Frequently referred to as “Big Data” it represents an important asset for the organization. Big data presents both opportunities and challenges for accounting professionals. Accounting professionals are expected to know how data is created, collected, stored, and accessed. As the custodians of the organization’s assets accountants are expected to understand and implement controls over the storage and use of the organization’s data. Further, as business professionals we are expected to know how to use this vast source of data to make better business decisions and identify potential risks. Understanding how to use data to formulate and solve business problems provides an opportunity for the accounting professional to become a forward thinking strategic partner in the organization. The challenge for accountants is to develop the skill set needed to extract value from big data through advanced analytics.

This course will prepare you to be a strategic business partner in the organization. The course will challenge you to think critically about whether and how data can improve business performance, create opportunities, and/or create risks. The course will also expose you to some of the most common business intelligence software packages currently used in organizations.

Course Objectives:

1. Develop a decision making framework.
2. Understand how data is collected, created, stored, and shared by technology.
3. Understand the processes need to develop, report, and analyze business data.
4. Understand how managers use business analytics to formulate and solve business problems.
5. Understand and identify business risks and ethical issues related to data collection, storage, and use.
Data Analytics in Accounting Syllabus Outline (3 credit hours)

1. Data and Its Significance in Accounting
   a. Data as an organizational asset
   b. Strategic role
   c. Integrity issues
   d. Ethical issues
2. Data and Decision Making
   a. Critical thinking and its place in data analytics
   b. Framing questions and determining data requirements
3. Data Warehousing and Data Mining
   a. Database design and queries (Access)*
   b. Data Mining techniques (Access/Excel/SPSS/Hadoop)*
4. Data Visualization (Excel/Tableau)*
   a. Recognizing and analyzing patterns
   b. Understanding relationships between data
5. Applied Data Analytics and Decision Making (Excel/Access/SPSS Modeler/ACL/SAS/SAP) *
   a. Audit
   b. Financial
   c. Managerial
   d. Tax

* - potential software tools that will be used

First 5 weeks of the course.

Last 10 weeks of the semester: Case Analyses