

## Joint Certificate Program in Business Intelligence and Analytics

This program equips students with contemporary skills and knowledge in business intelligence and analytics using SAS software. The program consists of four courses offered by the Department of Decision and Information Sciences. Candidate courses (and their use of SAS software) are listed below:

### **STAT301 Business Statistics**

This course provides a survey of statistical topics useful in support of managerial decision-making. The course covers sampling and sampling distributions, statistical inference, hypothesis testing, confidence interval estimation, chi-square test, regression analysis, and computer applications. The course has a heavily applied emphasis. (Software: JMP)

*Prerequisite: Introduction to Business Statistics*

### **BSAN465 Predictive Analytics**

This course provides an introduction to predictive analytics techniques used in business applications and social science research. Using enterprise-class analytics software and real-world data, students will learn how to build predictive models using techniques such as logistic regression, neural networks, cluster analysis, and decision trees. A course project is required. (Software: SAS Enterprise Guide and Enterprise Miner)

*Prerequisite: Business statistics*

### **BSAN481 Social Media Analytics**

This course introduces the technologies and managerial issues related to social media analytics (SMA). Students will learn the importance of social media in influencing the reputation of contemporary businesses, examine text mining, sentiment analysis, and social network analysis, and apply the concepts, techniques, and tools to analyzing social media data. Real-world data such as online reviews, microblog postings, human interaction networks, and business networks will be studied. Hands-on training will be provided. (Software: JMP, SAS Enterprise Miner and Text Miner)

*Prerequisite: Business statistics*

### **STAT440 Business Forecasting**

This course introduces time-series forecasting techniques to support trend forecasting and business cycles. Contemporary techniques such as moving average, exponential smoothing, ARIMA, and Box-Jenkins method are introduced. Software tools include spreadsheet and analytics systems are used. A course project is required. (Software: SAS Enterprise Guide)

*Prerequisite: Business statistics*