

## Motivation for MSCI:2800 Business Analytics

It has been over 10 years since Thomas Davenport wrote, “As a result, [employees trained analytics] make the best decisions: big and small, every day, over and over and over.”<sup>1</sup> Companies have taken note. In 2016, “data scientist,” a job title synonymous with analytics, was the top job on the job-advertising site Glassdoor<sup>2</sup> and demand seems likely to grow.<sup>3</sup> One of the key reasons that demand has continued to grow is that analytics has moved from being a skill practiced by PhD statisticians to being a part of how every function in the organization does its job. For instance, analytics is transforming human resources. For example, *The Wall Street Journal* recently noted, “A company can provide a job description, and AI will collect and crunch data from a variety of sources to find people with the right talents, with experience to match—candidates who might never have thought of applying to the company, and whom the company might never have thought of seeking out.”<sup>4</sup> There are similar examples in finance and accounting, fields that themselves have traditionally been considered quantitative.<sup>5</sup>

The course MSCI:2800 Business Analytics seeks to prepare Tippie College of Business undergraduates for this modern business world in which analytics is a central skill for success, whatever a student’s major and job. The course will introduce students to problem solving using data by teaching them how to transform data into insights. Among the topics discussed in the course will be data preparation and data visualization as well as statistical tools such as ANOVA, regression, and chi-square testing.

The course will use Microsoft Excel as its central analytics tool. Excel has nearly 1.3 billion users worldwide<sup>6</sup> and will be readily accessible to almost all Tippie graduates. Thus, teaching students basic analytics skills in Excel will almost guarantee that they are capable of doing analytics in their jobs. Further, a recent survey of Tippie faculty showed that faculty across all disciplines expect students to use Excel in their courses. This course will provide the foundation for those future courses.

MSCI:2800 replaces ECON:2800 Statistics for Strategy. The course is being moved to Management Sciences and the name changed for two reasons. First, four years ago, Management Sciences

---

<sup>1</sup> Davenport, Thomas H. “Competing on analytics.” *Harvard Business Review*, 2006, 84(1), 98 - 107.

<sup>2</sup> Dishman, Lydia. “These are the top 25 jobs in the U.S. this year.” *Fast Company*. January 20, 2016. Web. <https://www.fastcompany.com/3055629/the-future-of-work/these-are-the-top-25-jobs-in-the-us-this-year>.

<sup>3</sup> Dishman, Lydia. “How to satisfy demand for the biggest job of the 21<sup>st</sup> century.” *Fast Company*. April 1, 2016. Web. <https://www.fastcompany.com/3058502/how-to-satisfy-demand-for-the-biggest-job-of-the-21st-century>.

<sup>4</sup> Greenwald, Ted. “How AI Is Transforming the Workplace.” *The Wall Street Journal*, March 10, 2017. Web. <https://www.wsj.com/articles/how-ai-is-transforming-the-workplace-1489371060>.

<sup>5</sup> Blake Oliver. “The future of automation and accounting.” *Accounting Today*. December 15, 2016. Web. <https://www.accountingtoday.com/opinion/the-future-of-automation-and-accounting>, and Andrew Bourque. “How artificial intelligence is impacting the highest levels of finance.” *CIO*, March 22, 2017. Web. <http://www.cio.com/article/3183573/artificial-intelligence/how-artificial-intelligence-is-impacting-the-highest-levels-of-finance.html>.

<sup>6</sup> Callahan, John. “There are now 1.2 billion Office users and 65 million Office 365 commercial customers.” *Windows Central*. March 31, 2016. Web. <http://www.windowscentral.com/there-are-now-12-billion-office-users-60-million-office-365-commercial-customers>.

introduced a major in business analytics. Currently, this major is the only major without a course aligned to it in the business core. The proposed change creates this alignment.

Second, as discussed in the first paragraph, today's students need to understand how to work with and analyze data. The statistical tools taught in ECON:2800 are important and in fact many will find their way into the proposed course, but they are not enough. Students must connect these tools with data. The redesigned course teaches this skill.