FUNCTIONAL DATA ANALYTICS, B.S.

Begin Campus: Any Penn State Campus

End Campus: World Campus

Program Description

Functional Data Analytics is an interdisciplinary major that prepares students to be data professionals who are skilled communicators/ project managers capable of translating the results of complex data analyses for leaders and decision-makers. Students completing this program will have excellent written, oral, and visual communication/ presentation skills and will understand the appropriate application, use of analytical tools, and interpretation of results of analyses. The program begins with courses that provide students with the fundamental communication, mathematical and statistical skills needed to analyze data and communicate the results of the analysis. Three of four data analysis courses covering descriptive, diagnostic, predictive, and prescriptive analytics will be co-taught by a data analytics and an English faculty member to help students learn analytical techniques while practicing essential visualization, oral, and written communication skills. In these courses, students will use real data sets supplied by external partners including businesses or industries. In their second year, students will choose a knowledge domain (e.g., higher education administration, finance, SMART manufacturing, genomics) in which to gain a deeper understanding of domain-specific applications of data analysis. The program will culminate in a two-semester capstone course in which students apply all skills learned in their analytics and domain-specific courses to data provided by an external stakeholder (business, industry, not-for-profit organization, scientific researcher) to address a question posed by that stakeholder.

What is Functional Data Analytics?

The world runs on data, and the people who best understand it—and who can explain it—are essential to any organization. Functional Data Analysts use their deep understanding of the numbers and their communication skills—whether verbal presentations, written reports, or informative graphics—to present a clear, comprehensive story about where an organization has been, where it is now, and where it is headed in the future.

You Might Like This Program If…
- You have both an analytics side and a creative streak, and you think it would be interesting to use both.
- You enjoy looking for—and finding—patterns.
- You're curious about a variety of fields, including business, math, and communications.