DATA ANALYTICS MINOR

REQUIRED COURSES

12 credit hours

The three foundational courses offer students experience in statistics, introduction to programming in R and Python, and exposure to applications of analytics techniques in a variety of real-world settings.

- CSC-121 Introduction to Computer Programming
- CSC-272 Introduction to Data Mining
- MTH-245 Statistics and Data Analysis in R

At a minimum, students will need a background in Statistics (MTH-120/ECN-120) for MTH-245. Students pursuing a Data Analytics Minor may substitute CSC-121 for CSC-105 as a prerequisite for CSC-272.

ELECTIVE COURSES: DOMAIN-SPECIFIC APPROACHES

8 credit hours, at least 4 credit hours must be from a course not labeled MTH or CSC

- BIO-222 Research and Analysis
- BUS-230 Introduction to Data Analysis
- BUS-337 Intermediate Business Analytics
- CSC-341 Database Management Systems
- CSC-343 Artificial Intelligence
- CSC-372 Machine Learning with Big Data
- ECN-331 Empirical Methods in Economics
- ECN-475 Senior Seminar in Economics (by approval of the oversight committee)
- EES-201 Geographic Information Systems
- EES-301 Remote Sensing of the Environment
- HSC-201 Research and Evaluation in Health Sciences
- HSC-401 Epidemiology
- HST-322 Simulating Historic Communities in Virtual Space
- MTH-335 Mathematical Models and Applications
- MTH-337 Operations Research
- MTH-340 Probability
- MTH-341 Mathematical Statistics
- MTH-345 Statistical Modeling in R
- PSY-202 Research Methods and Statistics II
- SOC-303 Qualitative Research Seminar
- SOC-470 Qualitative Research Seminar
- SUS-242 Dynamic Systems Modeling
INDEPENDENT STUDY ELECTIVES AND SUMMER RESEARCH EXPERIENCES

Independent Study, Independent Research, and Directed Independent Study (Courses numbered 501, 502, and 504) may be used as electives with approval of the oversight committee. Likewise, directed summer research experiences (TFA-002) may be considered for use as electives with approval, along with the submission of a substantive research paper to be reviewed by the committee. Faculty-supervised independent study and research offer excellent learning opportunities and should be encouraged when the work is empirical in nature, directly involving data analytics if possible, and congruent with the objectives for the electives above.

FURMAN ENGAGED

For successful completion of the minor, students must give a presentation at Furman Engaged. This may take the form of an oral presentation or a poster, and should detail a significant data analytics project undertaken by the student in the course of their minor studies.

DATA ANALYTICS MINOR OVERSIGHT COMMITTEE

For more information, contact the Data Analytics Minor Chair, Dr. Kevin Hutson, or any member of the Data Analytics Minor Oversight Committee:

- Dr. Liz Bouzarth (Mathematics)
- Dr. Roy Bower (Mathematics)
- Dr. Ben Grannan (Business and Accounting)
- Dr. Kevin Hutson (Mathematics), Chair
- Dr. Taha Kasim (Economics)
- Dr. Kevin Treu (Computer Science)