Developing Data Science Programs
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Outline

Data Science Programs

MS Curriculum
Data Science Profiles

No one person can be the perfect data scientist, so we need teams.

Diagram showing the importance of teams in data science, with categories such as Data Viz, Machine Learning, Mathematics, Statistics, Computer Science, Communication, and Domain Expertise.
Drew Conway’s Venn Diagram of Data Science
The Data Science Process
Types of Degree Programs

Degree Programs

- Master of Science in Analytics;
- Master of Science in Data Science;
- Master of Science in Business Analytics;
WVU Master of Data Science

Entrance requirements: single variable calculus
Students in the Master of Data Science program must complete 30 credit hours:

*Required courses*: 15 credit hours

- DSCI 501 Data Analysis
- DSCI 502 Data Modeling
- DSCI 503 Data Science Processes
- DSCI 504 Data Visualization
- DSCI 601 High-Dimensional Data Analysis or DSCI 602 Massive Data Mining.
WVU Master of Data Science (cont.)

*Elective Courses*: 12 credit hours

- STAT 521 SAS Programming
- STAT 522 Advanced SAS Programming
- STAT 523 Statistical Computing
- DSCI 601 High-Dimensional Data Analysis or DSCI 602 (Massive Data Mining)
- STAT 623 Data Technologies
- STAT 624 High-Performance Analytics
Experiential Component/Capstone: 3 credit hours
DSCI 682 Data Science Practicum or DSCI 689 Professional Field Experience
The experiential component includes a capstone project integrating data science skills with professional knowledge. Students should apply the methodologies learned in this program to a real-world problem in data science. A reproducible report on the methodologies used and the results is required for this experiential component/capstone.