

DATA ANALYSIS MINOR

Banner Code: DATA

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The Data Analysis Minor provides students with a background in data analysis, statistical methodology, and data science. It is intended to complement undergraduate degree programs such as computer science, economics, environmental engineering, geography, mathematics, nursing, psychology, public administration, sociology, and systems engineering.

Admissions & Policies

Policies

For policies governing all minors, see AP5.3.4 Minors (<http://catalog.gmu.edu/policies/academic/undergraduate-policies/#ap-5-3-4>).

Digital Technology Credential

Student can earn the Digital Technology Credential (<https://volgenau.gmu.edu/academics/certificates-and-credentials/digital-technology-credential/>) by enrolling in the Data Analysis Minor.

Program Requirements

The minor requires 15 credits: a core sequence of 6 credits, plus 9 credits of electives. Grades of C or better are required in all courses. At least 3 of the 9 elective credits must be in STAT (<http://catalog.gmu.edu/courses/stat/>) or CDS (<http://catalog.gmu.edu/courses/cds/>) courses numbered above 300. At least 8 credits must be in courses not required by the student's major.

Requirements

Minor Requirements

Total credits: 15

Core Sequence Credits

Code	Title	Credits
Select one sequence from the following: ¹		
Sequence 1:		
STAT 250	Introductory Statistics I (Mason Core) (http://catalog.gmu.edu/mason-core/)	6
STAT 350	Introductory Statistics II	
Sequence 2:		
STAT 344	Probability and Statistics for Engineers and Scientists I	6
STAT 354	Probability and Statistics for Engineers and Scientists II	
Total Credits		6

¹ Mathematics majors may substitute MATH 351 and MATH 352 for the core sequence credits provided all 9 elective credits are in STAT courses.

Electives

Code	Title	Credits
Select 9 credits from the following: 9		
STAT 362	Introduction to Computer Statistical Packages	9
STAT 455	Experimental Design	
STAT 456	Applied Regression Analysis	
STAT 460	Introduction to Biostatistics	
STAT 462	Applied Multivariate Statistics	
STAT 463	Introduction to Exploratory Data Analysis	
STAT 465	Nonparametric Statistics and Categorical Data Analysis	
STAT 472	Introduction to Statistical Learning	
STAT 474	Introduction to Survey Sampling	
STAT 499	Special Topics in Statistics	9
BENG/IT 322	Health Data Challenges	
BINF 401	Bioinformatics and Computational Biology I	
BIOL 214	Biostatistics for Biology Majors	
BIOL 312	Biostatistics for Bioinformatics	
BIOL 314	Introduction to Research Design and Analysis	
CDS 130	Computing for Scientists (Mason Core) (http://catalog.gmu.edu/mason-core/)	
CDS 301	Scientific Information and Data Visualization	
CDS 302	Scientific Data and Databases	
CDS 303	Scientific Data Mining	9
CS 450	Database Concepts	
CS 484	Data Mining	
CYSE 101	Introduction to Cyber Security Engineering	
ECON 345	Introduction to Econometrics	
ECON 445	Design and Analysis of Experiments	
GOVT 300	Research Methods and Analysis (Mason Core) (http://catalog.gmu.edu/mason-core/)	
GGG 300	Quantitative Methods for Geographical Analysis	
GGG 354	Data Analysis and Global Change Detection Techniques	
OR/SYST 335	Discrete Systems Modeling and Simulation	9
OR/MATH 441	Deterministic Operations Research	
OR/MATH 442	Stochastic Operations Research	
PSYC 300	Statistics in Psychology	
SOCI 313	Statistics for the Behavioral Sciences (Mason Core) (http://catalog.gmu.edu/mason-core/)	
SOCI 405	Analysis of Social Data	
SYST 469	Human Computer Interaction	

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SYST 473	Decision and Risk Analysis
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Total Credits	9