Master of Science in Data Analytics (MS in DAAN)
Required and Elective Courses

The Master of Science in Data Analytics degree will be awarded upon successful completion of the 30-credit program, and completion of SARI.* The courses are not listed in sequential order. All module course work is subject to change as new courses are developed or renumbered.

If you have any questions throughout your studies, please email EngHelp@psu.edu.

15-Credit Required Curriculum			
Course #	**Course Titles**	**Semester**	**Grade**
STAT 500	Applied Statistics (***Should be one of first courses taken***)		
DAAN 501	Research Methodology and Problem Framing		
DAAN 545	Data Mining (*formerly SWENG 545*) (*INSC 521 is NOT a required prerequisite*)		
DAAN 871	Data Visualization		
IE 575	Foundations of Predictive Analytics ***(Required Prerequisite: STAT 500)***		
9-Credit Elective Curriculum			
Course #	**Course Titles**	**Semester**	**Grade**
Required 6-Credit Thesis (Two distinct semesters of DAAN 600 @ 3-credits each, totaling 6 credits)			
DAAN 600	Thesis Research (*Required Prerequisite: DAAN 501*) *NOTE: To schedule, please contact EngHelp@psu.edu*		
Scholarship and Research Integrity (SARI) Requirement			
SARI Module - Required Online Activity		**Semester Completed**	
Note: The SARI Module is only offered in Spring & Fall semesters.			

NOTE: Students must maintain a minimum grade point average of 3.0 (B) throughout the program. A 3.0 cumulative GPA is required to graduate. All course work toward the Master of Professional Studies in Data Analytics degree must be completed within eight years of admission to the program.

Questions & Advising: Students should contact their assigned faculty advisor with any questions or for advice on course selection. Course Descriptions are available at this link.

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Program Electives

9 Credits of Electives (*Choose 3 courses from the following list*)	
A-I 570	Deep Learning *(formerly DAAN 570)* **(Required Prerequisite: STAT 500)**
DAAN 822	Data Collection and Cleaning **(Required Prerequisite: STAT 500)** *(INSC 521 is <u>not</u> a required prerequisite)*
DAAN 825	Large-Scale Database and Warehouse
DAAN 846	Network and Predictive Analytics for Socio-Technical Systems
DAAN 862	Analytics Programming in Python **(Required Prerequisite: STAT 500)**
DAAN 881	Data-Driven Decision Making **(Required Prerequisite: STAT 500)**
DAAN 897	Enterprise Analytics Strategies
DAAN 897	Foundations of Marketing Analytics **(Required Prerequisite: STAT 500)**
ENGMT 520	Systems Optimization *(formerly SYSEN 530)* *(SYSEN 520 is <u>not</u> a required prerequisite)*
INSC 497	Business Intelligence
INSC 521	Database Design Concepts
STS 589	Ethics and Values in Science and Technology
SWENG 541	Advanced Database Design Concepts **(Required Prerequisite: INSC 521 or approval by Division)**
SYSEN 536	Decision and Risk Analysis in Engineering
SYSEN 805	Technical Project Management *(formerly SYSEN 505)*

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