

# Master of Applied Data Science

## Course Planning

The courses below are required and/or recommended for completing the Masters of Applied Data Science degree. Students must complete the degree with a minimum of 34 credits. Descriptions for courses available can be found in the MADS Courses and Important Dates readings in Coursera.

Note: For each course, we have indicated in what month they will typically be offered, but there may be instances where a course is run off-schedule.

*M1 = September/January/May | M2 = October/February/June | M3 = November/March/July | M4 = December/April/August | N/A = Not offered yet*

### Data Science Core Courses

- \_\_\_\_\_ SIADS 501: Being a Data Scientist (1 credit) (M1)
- \_\_\_\_\_ SIADS 503: Data Science Ethics (1 credit) (M3; prerequisite: SIADS 501)
- \_\_\_\_\_ SIADS 601: Qualitative Inquiry for Data Scientists (1 credit) (N/A)

### Computational Methods Courses

- \_\_\_\_\_ SIADS 505: Data Manipulation (1 credit) (M1)
- \_\_\_\_\_ SIADS 511: SQL & Databases (1 credit) (M1)
- \_\_\_\_\_ SIADS 515: Efficient Data Processing (1 credit) (M2)
- \_\_\_\_\_ SIADS 516: Big Data: Scalable Data Processing (1 credit) (M3; prerequisites: SIADS 505 and 511)
- \_\_\_\_\_ SIADS 611: Database Architectures and Technologies (1 credit) (M2; prerequisite: SIADS 511)

### Communication Courses

- \_\_\_\_\_ SIADS 521: Visual Exploration of Data (1 credit) (M3; prerequisite: SIADS 505)
- \_\_\_\_\_ SIADS 522: Information Visualization I (1 credit) (M2; prerequisite: SIADS 505)
- \_\_\_\_\_ SIADS 523: Communicating Data Science Results (1 credit) (M4; prerequisite SIADS 522)
- \_\_\_\_\_ SIADS 524: Presenting Uncertainty (1 credit) (M1; prerequisites: SIADS 522 and SIADS 502; advisory prerequisite: SIADS 521)
- \_\_\_\_\_ SIADS 622: Information Visualization II (1 credit) (N/A; prerequisites: SIADS 522)

### Analytic Technique Courses

- \_\_\_\_\_ SIADS 502: Math Methods for Data Science (1 credit) (M2)
- \_\_\_\_\_ SIADS 532: Data Mining I (1 credit) (M4; prerequisites: SIADS 502 and SIADS 505)

*-- Continued on next page --*

- \_\_\_\_\_ SIADS 542: Supervised Learning (1 credit) (M1; prerequisites: SIADS 502 and SIADS 505)
- \_\_\_\_\_ SIADS 543: Unsupervised Learning (1 credit) (M2; prerequisites: SIADS 542)
- \_\_\_\_\_ SIADS 630: Causal Inference (1 credit) (M1)
- \_\_\_\_\_ SIADS 631: Experiment Design and Analysis (1 credit) (M1)
- \_\_\_\_\_ SIADS 632: Data Mining II (1 credit) (M2; prerequisites: SIADS 532)
- \_\_\_\_\_ SIADS 642: Deep Learning (1 credit) (M3; prerequisites: SIADS 542)
- \_\_\_\_\_ SIADS 643: Machine Learning Pipelines (1 credit) (M3; prerequisites: SIADS 542 and SIADS 632)
- \_\_\_\_\_ SIADS 652: Network Analysis (1 credit) (N/A; prerequisites: SIADS 503, SIADS 542, and SIADS 543)
- \_\_\_\_\_ SIADS 655: Applied Natural Language Processing (1 credit) (M4; prerequisites: SIADS 542 and SIADS 643)

### **Data Science Application Courses**

- \_\_\_\_\_ SIADS 680: Learning Analytics (1 credit) (N/A; advisory prerequisites: SIADS 503, SIADS 521, and SIADS 523; prerequisites: SIADS 631, SIADS 694&695)
- \_\_\_\_\_ SIADS 682: Social Media Analytics (1 credit) (N/A; prerequisites: SIADS 503, SIADS 522, SIADS 652, and SIADS 655)
- \_\_\_\_\_ SIADS 685: Information Retrieval (1 credit) (N/A; tentative prerequisites: SIADS 515, SIADS 502, and SIADS 503)

### **Milestone and Capstone Courses**

- \_\_\_\_\_ SIADS 591&592: Milestone I (2 credits) (M1&M4; prerequisites: SIADS 501, SIADS 503\*, SIADS 505, SIADS 511, SIADS 515, SIADS 516, SIADS 521, and SIADS 522)
- \_\_\_\_\_ SIADS 694&695: Milestone II (2 credits) (M1&M4; co-requisite for SIADS 694: SIADS 524; prerequisites for both: SIADS 543, SIADS 591, SIADS 592, SIADS 630, SIADS 642, SIADS 643)
- \_\_\_\_\_ SIADS 697&698: Capstone (3 credits) (N/A; prerequisites: Two of: SIADS 680, SIADS 682, SIADS 685. Others TDB)

*\*Please note that SIADS 503 will be an enforced prerequisite by Month 4, Fall 2020.*