

- ❖ The Master of Science in Data Science program is structured as a total of twelve (12) 4-unit, letter-graded courses grouped into three subsections: Foundational (Group A), Core (Group B), and General Electives (Group C).
- ❖ Grading: At least 8 letter grade courses must count towards your degree (all 6 Group B Courses + 2 Elective Courses). Comprehensive Exam courses must be taken for a letter grade and passed with B- or better.
- ❖ Students **CANNOT** repeat a course for credit unless they earned a D, F, U, or W grade.
- ❖ Students must meet the Academic Residency requirement.

Group A: Foundational Courses (up to 16 Units)*

DSC200	Data Science Programming
DSC202	Data Management for Data Science
DSC210	Numerical Linear Algebra
DSC211	Introduction to Optimization
DSC212	Probability and Statistics for Data Science

*Exceptions may be granted via petition

Group B: Required Core Courses (12 Units)

DSC240	Machine Learning	Prerequisite: DSC210, DSC212 Pre/Co-requisite: DSC 200, 202, 211
DSC241	Statistical Models	Prerequisite: DSC210, DSC212
DSC260	Data Ethics and Fairness	

Group B: Core Courses (Minimum 12 Units)

DSC203	Data Visualization and Scalable Visual Analytics	Prerequisite: DSC202
DSC204A	Scalable Data Systems	Prerequisite: DSC202
DSC204B/ CSE255	Big Data Analytics and Applications	Prerequisite: Instructor Approval
DSC206	Algorithms for Data Science	Prerequisite: DSC212
DSC215	Statistical Critical Thinking	Recommended DSC 212
DSC242	High-dimensional Probability and Statistics	Prerequisite: DSC 240, DSC 241
DSC243	Advanced Optimization	Prerequisite: DSC 211, DSC212
DSC244	Large-Scale Statistical Analysis	Prerequisite: DSC 210, DSC 212, DSC 241
DSC245	Introduction to Causal Inference	Prerequisite: DSC 212, DSC 240
DSC250	Advanced Data Mining	Recommended DSC 212
DSC261	Responsible Data Science	Prerequisite: DSC210, DSC240

Group C: General Electives (Remaining Courses)

COGS 209, 231, 243; **CSE** 203A, 251A, 224, 251B, 256, 252D, 258R, 260; **DSC** 205, 213, 214,231,251,252, 253, 254, 291, 299* (Plan I); **ECE** 208; **MATH** 181 A-B-C, 284, 285, 287A-B; **MED** 277, 264; **MGTA** 463; **MGT** 430; **SIOC** 228;

- ❖ 4-unit, graduate level 200+ courses from BENG, MGT, MGTA, COGS, FMPH, PHYS, BGGN, MATH, BNFO, POLI, SIOB, ECE, MAE, and CSE taken for a letter grade may be counted upon review and/or petition approval. Exceptions to this list require departmental approval via petition.

Plan I Thesis (8-12 Units)

Minimum of 8 and a maximum of 12 units of DSC299 (Thesis Research)

Course #	Course Title	Quarter	Pass
DSC 299	Thesis Research		
DSC 299	Thesis Research		
DSC 299	Thesis Research		

Plan II Comprehensive Exam (3 Courses)

Students are required to successfully pass the comprehensive examination in three courses drawn from each of the three areas: ML/computing, math/statistics, algorithms/systems.

Course #	Course Title	Area of Study	Quarter	Pass
DSC240	Machine Learning	ML/Computing		
DSC241	Statistical Models (or MATH282B)	Math/Stats		
DSC204A	Scalable Data Systems (or CSE202)	Algorithms/Systems		
DSC204B	Big Data Analytics and Applications	Algorithms/Systems OR Math/Stats		
DSC206	Algorithms for Data Science	Algorithms/System		
DSC243	Advanced Optimization	ML/Computing OR Math/Stats		
DSC244	Large-Scale Statistical Analysis	Math/Stats		
DSC245	Introduction to Causal Inference	Math/Stats OR Algorithms/System		

Student acknowledges this is a tentative academic plan which they are responsible for updating their faculty mentor and their graduate advisor. To avoid academic probation, students are required to earn a 3.0 GPA (B or better) in all courses. Graduate students must have a cumulative GPA of 3.0 or higher to complete the degree.

Program Start Date: _____

Program End Date: _____

Student Name:	PID:
Signature:	Date:

MS Advisor Name:	
Signature:	Date: