DATA SCIENCE (MS) - Overview of Graduation Requirements

A total of 30 credits will be required for the M.S. in Data Science degree. Students will choose either master project or thesis for graduation. Students will be reviewed annually for satisfactory progress. University Guidelines will be followed for students with unsatisfactory performance. Students who do not meet the requirements of their remediation plans in the agreed time frame may be subject to dismissal.

1. **REQUIRED CORE COURSES – 18 credits**

Complete 6 courses for 18 semester hours:

Course Number	Course Name	Credits
CSIT 528	Statistics for Data Sciences	3
CSIT 553	Exploratory Data Analysis and Visualization	3
CSIT 555	Database Systems	3
CSIT 558	Data Mining	3
CSIT 571	Computer Algorithms and Analysis	3
CSIT 598	Machine Learning	3

2. **ELECTIVE COURSES – 6 credits**

Complete 2 courses for 6 semester hours:

STAT 538	Applied Regression Analysis	3
APLN 550[1]	Computational Linguistics	3
APLN 552	Current Issues in Natural Language Processing	3
CSIT 548	Scalable Distributed Systems	3
CSIT 552	Python for Data Science	3
CSIT 554	Big Data Analytics	3
CSIT 599	Advanced Algorithms for Data Science	3

3. **CULMINATING EXPERIENCE – 6 credits**

CSIT 696	Research Methods in Computing	3

Complete 1 course for 3 semester hours:

CSIT 697	Master's Project	3
CSIT 698	Master's Thesis	3

[1] APLN 500 is the prerequisite for APLN 550 and APLN 552

Proposed Sequence for Completion (Full Time Students)

Semester 1
CSIT 528 Statistics for Data Sciences
CSIT 555 Database Systems
CSIT 571 Computer Algorithms and Analysis

Semester 2
CSIT 558 Data Mining
CSIT 553 Exploratory Data Analysis
CSIT 598 Machine Learning

Semester 3
CSIT 696 Research Methods in Computing
Elective 1
Elective 2

January or Summer Term
Either
CSIT 697 Master's Project
CSIT 698 Master's Thesis

Proposed Sequence for Completion (Part Time Students)

Semester 1
CSIT 528 Statistics for Data Sciences
CSIT 555 Database Systems

Semester 2
CSIT 571 Computer Algorithm and Analysis
CSIT 558 Data Mining

Semester 3
CSIT 553 Exploratory Data Analysis
CSIT 598 Machine Learning

Semester 4
Elective 1
Elective 2

Semester 5
CSIT 696 Research Methods in Computing

January or Summer Term
Either
CSIT 697 Master's Project
CSIT 698 Master's Thesis