

**University of Illinois at Urbana-Champaign
Professional MCS-DS Degree Program Requirements
Student Planning Worksheet**

Name:

COMMENTS

Must maintain an overall 3.0 GPA	
Degree must be completed within 5 years	
Complete 32 Credit Hours	
Breadth Requirement (16 hrs) - Total Credit Hours Completed	
Advanced Coursework (12 hrs) - Total Credit Hours Completed	
Additional Coursework (4 hrs) - Total Credit Hours Completed	
Total Credit Hours Completed	

BREADTH REQUIREMENTS: 16 credit hours

Must complete at least one course from each area with a grade of B- or higher. (Accompanying MOOC courses are listed within parenthesis after the High-Engagement course title.)

Data Mining (must select at least one)	CREDIT HRS	GRADE	COMMENTS
CS 410 Text Information Systems (Text Retrieval & Search Engines + Text Mining & Analytics)	4		
CS 412 Intro to Data Mining (Pattern Discovery + Cluster Analysis)	4		
Data Visualization (must select at least one)			
CS 498 Data Visualization (Data Visualization)	4		
Machine Learning (must take at least "Applied Machine Learning")			
CS 498 Applied Machine Learning (Applied Machine Learning)	4		
CS 598 / STAT 542 Practical Statistical Learning (Model-Based Learning)	4		
Cloud Computing (must select at least one)			
CS 425 Distributed Systems (Cloud Computing Concepts: Parts I & II)	4		
CS 498 Cloud Computing Applications (Cloud Computing Applications: Parts 1 & 2)	4		
Total Credit Hours from Breadth Coursework - 16 credit hours			

ADVANCED COURSEWORK: 12 credit hours *(Any three courses from the list below; Grades must be C or higher)*

500-LEVEL Courses (500-590 or 598)	CREDIT HRS	GRADE	COMMENTS
Statistical Analysis			
STAT 578 / CS 598 Advanced Bayesian Modelling	4		
Machine Learning			
CS 598 / STAT 542 Practical Statistical Learning (Model-Based Learning)	4		
Information Science			
LIS 531 / CS 598 Theory & Practice of Data Cleaning (Theory & Practice of Data Cleaning)	4		
LIS 531 / CS 598 Foundations of Data Curation (Foundations of Data Curation)	4		
Capstone Courses			
CS 598 Data Mining Capstone (must have completed CS 410 and CS 412)	4		
CS 598 Cloud Computing Capstone (must have completed CS 498 Cloud Computing Applications and one other Cloud Computing breadth course)	4		
Total Credit Hours from Advanced Coursework - 12 credit hours			

ADDITIONAL COURSEWORK: 4 hours *(Any course from the list below; Grade must be C or higher.)*

	CREDIT HRS	GRADE	COMMENTS
Statistical Analysis			
STAT 420 Methods of Applied Statistics (Methods of Applied Statistics)	4		
Or any other course from "Breadth Requirements" or "Advanced Coursework"			
	4		
Total Credit Hours from Additional Coursework (4 credit hrs)			