

**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	
<b>Total Credit Hours Completed</b>	

**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.)

	CREDIT HRS	GRADE	COMMENTS
<b>Database and Information Systems: Data Mining</b>			
CS 410 Text Information Systems (Text Retrieval & Search Engines + Text Mining & Analytics)	4		
CS 411 Database Systems	4		
CS 412 Intro to Data Mining (Pattern Discovery + Cluster Analysis)	4		
<b>HCI / Graphics</b>			
CS 498 Data Visualization (Data Visualization)	4		
<b>Artificial Intelligence: Machine Learning</b>			
CS 498 Applied Machine Learning (Applied Machine Learning)	4		
<b>Systems &amp; Networking: Cloud Computing</b>			
CS 425 Distributed Systems (Cloud Computing Concepts: Parts I & II)	4		
CS 498 Cloud Computing Applications (Cloud Computing Applications: Parts 1 & 2)	4		
CS 498 Cloud Networking	4		
<b>Total Credit Hours from Breadth Coursework - 16 credit hours</b>			

**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
<b>Statistical Analysis</b>			
CS 598 / STAT 578 Advanced Bayesian Modelling	4		
<b>Machine Learning</b>			
CS 598 / STAT 542 Practical Statistical Learning (Model-Based Learning)	4		
<b>Information Science</b>			
CS 513/ IS 532 Theory & Practice of Data Cleaning (Theory & Practice of Data Cleaning)	4		
CS 598 / LIS 531 Foundations of Data Curation (Foundations of Data Curation)	4		
<b>Capstone Courses</b>			
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		
<b>Total Credit Hours from Advanced Coursework - 12 credit hours</b>			

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

	CREDIT HRS	GRADE	COMMENTS
<b>Statistical Analysis</b>			
STAT 420 Methods of Applied Statistics (Methods of Applied Statistics)	4		
<b>Or any other course from "Breadth Requirements", "Advanced Coursework", or other CS courses approved for the online MCS.</b>			
	4		
<b>Total Credit Hours from Additional Coursework (4 credit hrs)</b>			