

University of Illinois at Urbana-Champaign
Professional Online MCS Degree Program Requirements (Coursera Platform)
Student Planning Worksheet

Name:

COMMENTS

Must maintain an overall 3.0 GPA (B average)	
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: 12-16 credit hours

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

	CREDIT HRS	GRADE	COMMENTS
Artificial Intelligence *			
CS 445 Computational Photography**	4		
CS 498 Applied Machine Learning	4		
Database and Information Systems *			
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		
Interactive Computing (Graphics / HCI) *			
CS 418 Interactive Computer Graphics	4		
CS 445 Computational Photography**	4		
CS 498 Data Visualization (Data Visualization)	4		
CS 519 Scientific Visualization [Recommended prereq: CS 418 or CS 498 Data Visualization]***	4		
Parallel Computing			
CS 484 Parallel Computing	4		
Programming Languages & Software Engineering			
CS 421 Programming Languages and Compilers	4		
CS 427 Software Engineering I	4		
Scientific Computing			
CS 450 Numerical Analysis	4		
Systems & Networking *			
CS 425 Distributed Systems (Cloud Computing Concepts: Parts 1 & 2)	4		
CS 498 Cloud Computing Applications (Cloud Computing Applications: Parts 1 & 2)	4		
CS 498 Cloud Networking	4		
CS 498 Internet of Things			
Total Credit Hours from Breadth Coursework - 12-16 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	
CS 513 Theory & Practice of Data Cleaning	4		
CS 519 Scientific Visualization [Recommended prereq: CS 418 or CS 498 Data Visualization]***	4		
CS 598 Advanced Bayesian Modeling	4		
CS 598 Practical Statistical Learning [Required prereq: CS 410, CS 412, an Artificial Intelligence breadth course, or STAT 420]	4		
CS 598 Foundations of Data Curation	4		
CS 598 Data Mining Capstone [Required prereqs: CS 410 and CS 412]	4		
CS 598 Cloud Computing Capstone [Required prereqs: CS 498 Cloud Computing Applications and one other Cloud Computing breadth course]	4		
Total Credit Hours from Advanced Coursework - 12 credit hours			

ADDITIONAL COURSEWORK: 4-8 hours (Grade must be **C or higher**)

	CREDIT HRS	GRADE	COMMENTS
STAT 420 Methods of Applied Statistics - Statistical Modeling in R	4		
Or any other course from "Breadth Requirements" or "Advanced Coursework"			
	4		
Total Credit Hours from Additional Coursework (4-8 credit hrs)			

* Breadth area coursework required for the MCS-Data Science track

** CS 445 will be applied toward only one of the breadth areas

*** If CS 519 is applied toward both the breadth and advanced coursework requirements, then 8 hours of "Additional Coursework" is required.