

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

Name:

Must maintain an overall 3.0 GPA (<i>B average</i>)			
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			
<i>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.)</i>			
	CREDIT HRS	GRADE	COMMENTS
Artificial Intelligence *			
CS 441 Applied Machine Learning	4		
CS 445 Computational Photography**	4		
CS 447 Natural Language Processing	4		
CS 598 Deep Learning for Healthcare [Recommended prereq: CS 441]*** (Deep Learning for Healthcare)	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 416 Data Visualization (Data Visualization)	4		
CS 418 Interactive Computer Graphics	4		
CS 445 Computational Photography**	4		
CS 519 Scientific Visualization [Recommended prereq: CS 416 or CS 418]***	4		
Parallel Computing			
CS 484 Parallel Programming	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		
Security and Privacy			
CS 463 Computer Security II	4		
Systems & Networking *			
CS 425 Distributed Systems (Cloud Computing Concepts: Parts 1 & 2)	4		
CS 435 Cloud Networking (Cloud Networking)	4		
CS 437 Internet of Things (Hands-on Internet of Things)	4		
CS 498 Cloud Computing Applications (Cloud Computing Applications: Parts 1 & 2)	4		
Total Credit Hours from Breadth Coursework - 12-16 credit hours			
ADVANCED COURSEWORK: 12 credit hours (<i>Any three courses from the list below; Grades must be C or higher</i>)			
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 416 or CS 418]***	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 Deep Learning for Healthcare [Recommended prereq: CS 441]*** (Deep Learning for Healthcare)	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 (<i>Grade must be C or higher</i>)			
	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 or CS 598 DLH is applied toward both the breadth and advanced coursework requirements, then 8 hours of "Additional Coursework" is required.