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

**Name:**

| | |
|---|---|
| Must maintain an **overall 3.0 GPA** | |
| Degree must be completed within 5 years | |
| Complete **32 Credit Hours** | |
| Breadth Requirement (12-16 hrs) - Total Credit Hours Completed | |
| Advanced Coursework (12 hrs) - Total Credit Hours Completed | |
| Additional Coursework (4-8 hrs) - Total Credit Hours Completed | |
| **Total Credit Hours Completed** | |

**BREADTH REQUIREMENTS: 12-16 credit hours** (Must complete at least one course from each area with a grade of B- or higher)

| AREA | CREDIT | GRADE | COURSE / SEMESTER |
|---|---|---|---|
| *Artificial Intelligence* | | | |
| CS 441, 445, 446, 447, 598 Deep Learning for Healthcare* | | | |
| *Database and Information Systems: Data Mining* | | | |
| CS 410, 411, 412 | | | |
| *Interactive Computing (HCI/Graphics)* | | | |
| CS 416, CS 519* | | | |
| *Systems & Networking: Cloud Computing* | | | |
| CS 425, 435, 437, 498 Cloud Computing Applications | | | |
| **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 | GRADE | COURSE / SEMESTER |
|---|---|---|---|
| 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]* | 4 | | |
| CS 513 Theory & Practice of Data Cleaning | 4 | | |
| CS 598 Foundations of Data Curation | 4 | | |
| *Capstone Courses* (Capstone Courses are not required; students who choose to take a capstone must meet BOTH prerequisites) | | | |
| 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** (Any course from the list below; Grade must be **C or higher**)

| *Additional Courses* | CREDIT | GRADE | COURSE / SEMESTER |
|---|---|---|---|
| CS 418, 421, 427, 450, 461, 463, 475, 484 | | | |
| STAT 420 Methods of Applied Statistics- Statistical Modeling in R | 4 | | |
| ***OR any extra course from "Breadth" or "Advanced" listed above.*** | | | |
| | | | |
| **Total Credit Hours from Additional Coursework- 4-8 credit hours** | | | |

*\* 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.*