# DATA ANALYTICS AND VISUALIZATION, CERTIFICATE

## Degree Requirements (12 Hours)

The student will select a minimum 12 credits (4 courses) #and#must be earned in concurrence with an undergraduate degree program.

Some courses or course sections may have enrollment restrictions. Pursuing this certificate does not override those restrictions and another course or section should be chosen from the Course List.

| Course | Title | Credits |
| --- | --- | --- |
| Select four courses from the following: | | 12 |
| ARTS 102 | Design Technology and Concepts | |
| ARTS 245 | Typographic Design I | |
| CSCE 101 | Introduction to Computer Concepts | |
| CSCE 102 | General Applications Programming | |
| CSCE 104 | Program Design and Development | |
| or ITEC 204 | Program Design and Development | |
| CSCE 106 | Scientific Applications Programming | |
| GEOG 105 | The Digital Earth | |
| GEOG 341 | Cartography | |
| GEOG 263 | Geographic Information Systems | |
| ISCI 201 | Data, Information & Society | |
| ISCI 202 | Information Literacy and Technology | |
| ISCI 250 | Information Design | |
| ISCI 301 | Text Mining in Big Data Analytics | |
| ISCI 310 | Information Science Data Analysis and Evaluation | |
| ITEC 264 | Computer Applications in Business I | |
| JOUR 203 | Principles of Visual Communications | |
| JOUR 346 | Graphics for Visual Communications | |
| JOUR 400 | Digital Media and Big Data Analysis | |
| MGSC 290 | Computer Information Systems in Business | |
| MGSC 291 | Applied Statistics for Business | |
| or STAT 301 | Statistical Methods for Data Analytics | |
| PSYC 220 | Psychological Statistics | |
| or SOCY 392 | Elementary Statistics for Sociologists | |
| or STAT 201 | Elementary Statistics | |
| or STAT 205 | Elementary Statistics for the Biological and Life Sciences | |
| or STAT 206 | Elementary Statistics for Business | |
| or STAT 509 | Statistics for Engineers | |
| or STAT 515 | Statistical Methods I | |
| **Total Credit Hours** | | **12** |