| BACHELOR OF SCIENCE IN DATA SCIENCE - Honors College  |         |        |   | Ca      | atalogue    |  |
|---|---------|--------|---|---------|-------------|--|
| Student:  |         |        | Date:   |         | 2024 - 2025 |  |
| netID:  | -       |        | Advisor:  | •       |             |  |
| Year 1  | -       |        |   | •       |             |  |
| Semester 1  | Cr      | Status | Semester 2  | Cr      | Status      |  |
| MA: MATH 1234 - Calculus I*   | 4       |        | MA: MATH 1248 - Calculus II MATH 1234   | 4       |             |  |
| QD: STAT 1410 - Basic Statistical Methods 1*  OR QD: STAT 2430 - Statistics for Engineering*  MATH 1234 | 3       |        | QR: CS 1640 - Discrete Structures  MATH 1234, CS 1210                         | 3       |             |  |
| QD: CS 1210 - Computer Programming I  | 3       |        | N1 or N2: Natural Science   | 3 or 4  |             |  |
| CEMS 1500 - CEMS First Year Seminar   | 1       |        | STAT 2830 - Basic Statistical Methods 2** STAT 1410 or STAT 2430 or STAT 3210 | 3       |             |  |
| Catamount Core (WIL1): HCOL 1000 - FY Writing Seminar   | 3       |        | HCOL 1500 - FY Research Presentation Seminar                                  | 3       |             |  |
|   |         |        |   |         |             |  |
| Total credits   | 14      |        | Total credits   | 16 - 17 |             |  |
| Year 2  |         |        |   |         |             |  |
| Semester 1  | Cr      | Status | Semester 2  | Cr      | Status      |  |
| CS 2100 - Intermediate Programming  |         |        | CS 2870 - Basics of Data Science  |         |             |  |
| CS 1210   | 4       |        | OR STAT 2870 - Basics of Data Science STAT 1410 or STAT 2430                  | 3       |             |  |
| STAT 2510 - Applied Probability   |         |        | STAT 3210 - Advanced Statistical Methods                                      |         |             |  |
| MATH 1248<br>OR STAT 5510 - Probability Theory  | _       |        | STAT 2830; Recommended: STAT 3010   | 2       |             |  |
| See catalogue MA: MATH 2522 - Applied Linear Algebra  | 3       |        |   | 3       |             |  |
| MATH 1248   |         |        | CS 2240 - Data Struc & Algorithms   |         |             |  |
| OR MA: MATH 2544 - Linear Algebra  MATH 1248; Coreq: MATH 2248 or MATH 2055                             | 3       |        | CS 2100   | 3       |             |  |
| HCOL 2000 - Sophomore Seminar   | 3       |        | Catamount Core  | 3       |             |  |
| N1 or N2: Natural Science   | 3 or 4  |        | HCOL 2000 - Sophomore Seminar   | 3       |             |  |
|   |         |        |   |         |             |  |
| Total credits   | 16 - 17 |        | Total credits   | 15      |             |  |
| Year 3  | •       |        |   | •       |             |  |
| Semester 1  | Cr      | Status | Semester 2  | Cr      | Status      |  |
| CS 2500 - Intro to Database Systems   |         |        | CS 3870 - Data Science I  |         |             |  |
| CS1210  | 3       |        | <u>OR</u> STAT 3870 - Data Science I<br>CS 1210, STAT 1410 or STAT 2430       | 3       |             |  |
| STAT 2010 Stat Computing & Data Analysis  |         |        | CS 3540 - Machine Learning<br>STAT 2510 or STAT 5510; MATH 2522 or MATH 2544  |         |             |  |
| STAT 3010 - Stat Computing & Data Analysis<br>STAT 1410 or STAT 2430 or STAT 3210                       |         |        | OR CS/STAT 3880 - Statistical Learning  |         |             |  |
|   | 3       |        | STAT 3210 CS 3240 - Algorithm Design & Analysis                               | 3       |             |  |
| CS Elective (2000 level or above)   | 3       |        | CS 2240; Pre/Coreq: CS 2250; STAT 2430 or STAT 2510                           | 3       |             |  |
| Catamount Core  | 3       |        | Data Science Elective   | 3       |             |  |
| Catamount Core  | 3       |        | Catamount Core  | 3       |             |  |
| CEMS 2010 - HCOL Research Experience  | 1       |        | CEMS 2020 - Research Thesis Proposal  | 1       |             |  |
| Total credits   | 16      |        | Total credits   | 16      |             |  |
| Year 4  |         | T      | T   |         |             |  |
| Semester 1  | Cr      | Status | Semester 2  | Cr      | Status      |  |
| CS 3920 - Senior Seminar  | 1       |        | Capstone Experience (Undergraduate Honors Thesis)**                           | 3       |             |  |
| Data Science Elective (3000 or above)   | 3       |        | Professional Development Elective   | 3       |             |  |
| Data Science Elective (Undergraduate Honors Thesis)**   | 3       |        | Data Science Elective (3000 or above)   | 3       |             |  |
| Catamount Core  | 3       |        | Catamount Core  | 3       |             |  |
| Catamount Core  | 3       |        | Free Elective   | 3       |             |  |
| Free Elective   | 3       |        |   |         |             |  |
| Total credits   | 16      |        | Total credits   | 15      |             |  |

Minimum Total Credits Required for Degree: 120

**Prerequisite courses** are listed below the course name in italics. Prerequisites listed are only for courses, as relevant to your specific degree program, and may have other registration restrictions. Please refer to the catalogue.

- \* Grade of C- or higher required
- \*\* Grade of C or higher required

Data Science Elective: Please refer to your degree audit to see course options.

<u>Catamount Core:</u> Students may take courses that fulfill more than one Catamount Core requirement, but they must still take at least 40 unique credits of courses that have been approved to fulfill Catamount Core requirements.

Students are encouraged to overlap Catamount Core requirements with their PLHC required courses (HCOL 1500 and both HCOL 2000 courses)

<sup>++</sup> Honors Thesis can fulfill DS Elective with advisor permission