MS DEGREE PROGRAM – In a nutshell

1. Once accepted to the M.S. Data Science program, each student is assigned a Faculty Advisor.
2. The student prepares a Plan of Study form and together with his/her Faculty Advisor, classes are reviewed to ensure that they satisfy the M.S. degree requirements.
3. The Faculty Advisor and the student decide whether a GQP or Thesis option is the best choice for the student’s career path.
4. Each student’s Plan of Study must be approved by Data Science Steering Committee.
5. In order to earn an M.S. degree in Data Science, students must complete a minimum of 33 credits of relevant work at the graduate level.
6. These 33 credits must include the course work listed below as well as either:
   a. The 3-credit Graduate Qualifying Project (GQP)
   b. The 9-credit M.S. Thesis
7. The M.S. degree requirements are for students pursuing an M.S. degree as well as students pursuing a combined B.S./M.S. degree.
8. A student’s Plan of Study may be changed with written approval of the Faculty Advisor, providing all degree requirements are met.
9. Any exceptions must be petitioned to the Data Science Steering Committee for approval.

DATA SCIENCE CORE COURSEWORK REQUIREMENT (15 CREDITS)

Students in the Data Science M.S. program are required to take DS 501 ‘Introduction to Data Science’ as well as one (1) course from each core Data Science interdisciplinary category:

- Mathematical Analytics
- Data Access and Management
- Data Analytics and Mining
- Business Intelligence and Case Studies

See chart below:

<table>
<thead>
<tr>
<th>DATA SCIENCE M.S. DEGREE – GQP PROJECT TRACK</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Graduate Qualifying Project (3 credits)</strong></td>
</tr>
<tr>
<td><strong>Concentration and Electives (15 credits)</strong></td>
</tr>
<tr>
<td>Mathematical Analytics (3 credits)</td>
</tr>
<tr>
<td>Introduction to Data Science (3 credits)</td>
</tr>
</tbody>
</table>
DATA SCIENCE M.S. DEGREE – M.S. THESIS BASED

<table>
<thead>
<tr>
<th>M.S. Thesis (9 credits)</th>
<th>Concentration and Electives (9 credits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math. Analytics (3 credits)</td>
<td>Data Access &amp; Management (3 credits)</td>
</tr>
<tr>
<td>Introduction to Data Science (3 credits)</td>
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</tbody>
</table>

GQP:

1. The 3 credit GQP (DS598) is usually done in teams and provides a capstone experience in applying data science skills to real-world problems.
2. Each project is carried out in cooperation with a sponsor who is approved and overseen by a Data Science Faculty member.
3. A student who follows this 'practice-oriented' project must gain sufficient Data Science depth by selecting at least 2 courses beyond the required core Data Science courses within the same area of concentration (where concentration could be a core DS course category or an application area).

THESIS:

1. The 9-credit Master’s Thesis (DS599) consists of a research project worth nine (9) graduate credit hours.
2. Students interested in research, and especially those considering pursuing a Ph.D., are encouraged to select the M.S. Thesis option.
3. Any tenure track affiliated Data Science faculty member may serve as the Thesis Advisor, otherwise a Tenure Track Data Science faculty co-advisor is required.
4. A Thesis Proposal must be approved by the student’s Faculty Advisor and the Data Science Steering Committee before the student may register for more than three (3) thesis credits.
5. The student must complete a written thesis and successfully present the results to the Data Science faculty in a public presentation.

ELECTIVES AND AREAS OF CONCENTRATION: (9-15 credits)

1. Students must fill the remainder of their (33) course requirement with Program Electives.
2. Electives are selected from the pre-approved list of courses on the Data Science Electives page, with the exception that no more than 16 of the 33 total Data Science credits are offered by the Robert A. Foisie School of Business.
3. Core courses ensure adequate coverage in essential Data Science knowledge and skills, while the wide variety of electives allows students to customize their Data Science degree program to domain and technique areas of personal interest.
4. Students are encouraged to choose electives which produce a consistent program of study.
5. The core coursework provides the needed breadth in Data Science, while students can gain depth in one of several concentrations by choosing electives from the pre-approved Data Science courses.
6. Students may choose courses beyond the pre-approved Data Science electives, i.e., engineering or science, but only with prior approval from the Data Science Program Review Board.
7. Independent study and Directed Research also require prior approval by the Data Science Steering Committee.