**Check List for BS in Mathematics - Data Science Option**

**MATHEMATICS (46 Hours; MUST have 30 advanced hours):**
- MATH 1431 Calculus I, Fall, Spring, Sum
- MATH 1432 Calculus II Fall, Spring, Sum
- MATH 2131 Linear Algebra Lab Fall, Spring, Sum
- MATH 2331 Linear Algebra Fall, Spring, Sum
- MATH 2433 Calculus III Fall, Spring, Sum
- MATH 3325 Transition to Advanced Mathematics Fall, Spring, Sum
- MATH 3331 Differential Equations Fall, Spring, Sum
- MATH 3333 Intermediate Analysis Fall, Spring, Sum
- MATH 3338 Probability Fall, Spring, Sum
- MATH 3339 Statistics for the Sciences Fall, Spring, Sum
- MATH 3331 3 hours APPROVED advanced MATH elective *
- MATH 43 3 hours 4000-level MATH elective **

**MATHEMATICS SENIOR SEQUENCE (6 Hours):**
- MATH 4322 Introduction to Data Science and Machine Learning
- MATH 4323 Data Science and Statistical Learning

**COMPUTER SCIENCE REQUIREMENTS (6 Hours):**
- COSC 1306 Computer Science & Programming
- COSC 2306 Data Programming
- OR 2430 Programming and Data Structures

**NSM Natural Sciences (14 Hours):**
- 1 hr Natural Sciences Lab***
- 1 hr Natural Sciences Lab***
- 3 hours NSM Approved Natural Science***
- 3 hours NSM Approved Natural Science***
- 3 hours NSM Approved Natural Science
- 3 hours NSM Approved Natural Science

**CORE (Check UH Catalog or UH Core Website for Pre-Requisites):**
- ENGL 1303 First Year Writing I
- ENGL 1304 First Year Writing II

**STATE REQUIREMENTS (12 Hours):**
- HIST 1376 or 1377 The United States to 1877
- HIST 1378 or 1379 The United States Since 1877
- POLS 1336 U.S. and Texas Constitutions and Politics
- POLS 1337 U.S. Government. Congress, President, and Court

**FREE ELECTIVES**
- Language/Philosophy/Culture (3 Hours)
- Creative Arts (3 Hours)
- Social & Behavioral Science (3 Hours)
- Writing in the Disciplines (3 Hours)*

**RULES YOU NEED TO KNOW:**
1. MINIMUM of a 2.00 GPA in cumulative, major, and minor GPA to graduate
2. PRE-REQ RULE: Must earn C- or better in pre-requisite for MATH courses
3. C- RULE: MAXIMUM of 6 hours of grades below C- allowed in MATH courses
4. LAST 30 hours must be exclusively completed at UH
5. MAXIMUM of 6 W's allowed during entire undergraduate career
6. MINIMUM of 36 advanced hours and 120 total hours to graduate
7. MAXIMUM of 66 lower level transfer hours may be applied towards UH degree

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**NSM CAPSTONE (Minimum 6 Advanced Hours):**
- Must choose from one of the following:
  - Minor
  - Senior Research Project
  - Double Major
  - Senior Honors Thesis
  - Double Degree
  - teachHouston

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**Students are strongly encouraged to fulfill the NSM Capstone by completion of a minor in Computer Science or Data Science-Computer Science.**
See Undergraduate Catalog for requirements.

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**Check List for BS in Mathematics - Data Science Option**

**CORE (Check UH Catalog or UH Core Website for Pre-Requisites):**

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**FREE ELECTIVES**
- Language/Philosophy/Culture (3 Hours)
- Creative Arts (3 Hours)
- Social & Behavioral Science (3 Hours)
- Writing in the Disciplines (3 Hours)*