Bachelor of Science – Data Science Major (Four Year Plan)

YEAR 1

Semester 1		Semester 2	
Course Number	**Credit Hours**	**Course Number**	**Credit Hours**
ENG 1301 (Composition I)# P: One of the following: (1) TSI ESSAY score of 4 and WRITING score of 340, (2) TSI ESSAY score of 5 and ABE WRITING diagnostic level 4, (3) TSI WRITING complete, OR (4) TSI WRITING exempt	3	**ENG 1302 (Composition II)** P: A grade of C or better in ENG 1301 or placement by examination	3
*MATH 2305 (Discrete Math)# P: C or better in MATH 1404 or MATH 1505 or both of MATH 1305 and MATH 1306 or placement by exam taken at UHD	3	***MATH 2422 (Linear Algebra and Multivariable Calculus w/Applications)** P: A grade of C or better in MATH 2421 or MATH 2402	4
UHD 1302 (Freshman Seminar - Mathematics) Transfer students see advisor for options	3	***CS 1311 (Intro. to Computing with Python)** P: MATH 1300 or placement by exam	3
Approved Life and Physical Science course (p. 60) P: Refer to catalog	3	**Approved Life and Physical Science course** (p. 60) P: Refer to catalog	3
*MATH 2421 (Differential and Integral Calculus w/Applications) P: C or better in one of the following: MATH 1505, MATH 1404, MATH 1305 OR MATH 1306	4	**POLS 2305 (Federal Government)** P: Enrollment in or completion of ENG 1301 or 010 core complete	3
Total Semester Hours	**16**	**Total Semester Hours**	**16**

YEAR 2

Semester 3		Semester 4	
Course Number	**Credit Hours**	**Course Number**	**Credit Hours**
CS 2311 (Data Structures & Computing with Python) P: C or better in CS 1311	3	***DATA 3401** P: Grade of C or better in CS 1311, MATH 2305, and DATA 2401.	4
&*MATH 3302 (Probability & Statistics) P: C or better in MATH 2421 or MATH 2402	3	**Approved Oral Communication course** (p. 60) P: Refer to catalog	3
*DATA 2401 (Data Science I) P: C or better in MATH 1505	4	**Approved American History course** (p. 60) P: Enrollment in or completion of ENG 1301 or 010 core complete	3
POLS 2306 (Texas Government) P: Enrollment in or completion of ENG 1301 or 010 core complete	3	**&PHIL 2305 (Introduction to Ethics)** P: Credit or enrollment in ENG 1301 or 010 (see catalog for additional course options)	3
Total Semester Hours	**13**	**Total Semester Hours**	**13**

Updated: February 2, 2021

Department of Mathematics and Statistics
The current catalog will have final authority over all degree requirements. Students should meet with their academic advisor to formulate their own plan.

YEAR 3

Semester 5		Semester 6	
Course Number	**Credit Hours**	**Course Number**	**Credit Hours**
STAT 3333 (Statistical Inference) P: C or better in MATH 3302 or C or better in DATA 2401 and concurrent enrollment in MATH 3302	3	**DATA 3402 (Data Collection, Transformation and Curation)** P: Grade of C or better in CS 2311 and DATA 3401.	4
DATA 4300 (Ethics in Data Science) P: Grade of C or better in DATA 3401, or department approval	3	**MATH 3423 (Advanced Linear and Optimization)** P: Grade of C or better in CS 1311 and MATH 2422; or in CS 1311, MATH 2403 and MATH 2307; or department approval	4
Approved American History course (p. 60) P: Enrollment in or completion of ENG 1301 or 010 core complete	3	**STAT 4310 (Applied Regression)** P: C or better in MATH 3302 or STAT 3309	3
Domain Focus Course See catalog for a list of approved domains	3	**Domain Focus Course** See catalog for a list of approved domains	3
Approved Creative Arts course (p. 60) P: Refer to catalog	3		
Total Semester Hours	**15**	**Total Semester Hours**	**14**

YEAR 4

Semester 7		Semester 8	
Course Number	**Credit Hours**	**Course Number**	**Credit Hours**
DATA 4319 (Statistical and Machine Learning) P: A grade of C or better in DATA 3401. Corequisite(s): Enrollment in MATH 3423 and STAT 3333	3	**STAT 4303 (Decision Mathematics)** P: C or better in MATH 3302 or STAT 3309 **OR** **STAT 4311 (Operations Research)** P: C or better in MATH 1305 and STAT 3309, or MATH 2307	3
Approved Social and Behavioral Sciences course (p. 60) P: Refer to catalog	3	**DATA Science Elective** P: See catalog for list of approved course options	3
Domain Focus Course See catalog for a list of approved domains	3	Free Elective (if needed)	3
Domain Focus Course See catalog for a list of approved domains	3	Free Elective (if needed)	3
Free Elective (if needed)	3	Free Elective (if needed)	3
Free Elective (if needed)	3		
Total Semester Hours	**18**	**Total Semester Hours**	**15**

Total Credit Hours Required   120

* Critical course required to stay on track within major and take subsequent courses

Students are expected to place into ENG 1301 and MATH 2401 via CLEP or Bypass exams – placement tests determine which english or math course students should start with and additional courses may be necessary

& Satisfies both common core and major requirement/prerequisite