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

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	3	**DATA 4300 (Ethics in Data Science)** P: Grade of C or better in DATA 3401, or department approval	3
DATA 3402 (Data Collection, Transformation and Curation) P: Grade of C or better in CS 2311 and DATA 3401.	4	**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 MATH 3317 or STAT 3311 or STAT 3333 or STAT 3334	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	**16**	**Total Semester Hours**	**13**

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 (can be substituted with CS 4319)	3	**STAT 4303 (Decision Mathematics)** P: C or better in MATH 3302 or MATH 3317 or STAT 2305 **OR** **STAT 4311 (Operations Research)** P: C or better in STAT 2305, or MATH 2307 or MATH 2422 or STAT 3311	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

Updated: July 28, 2022

* 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