Bachelor of Science in Data Science (Psychology)

About This Program

In the Bachelor of Science in Data Science Psychology concentration, students study cognitive and behavioral data using statistical and computational methods. This track is well-suited for students interested in psychological research, human behavior analysis, mental health applications, human-computer interaction, and related areas. Beyond the UTA Core Curriculum requirements, the degree requires a sequence of courses in Mathematics, Data Science, and Psychology. In addition, students must complete a year-long Capstone project in collaboration with a supervisor within the College of Science or an Industry Partner.

Competencies

1. Upon completion, students will demonstrate knowledge of fundamentals of mathematics and statistics, in applications to data science.
2. Upon completion, students will demonstrate knowledge of computer programming through receiving a certificate, and therefore passing, a programming course.
3. Upon completion, students will demonstrate the ability to effectively work in teams to complete data science projects

Curriculum

Foundations		
General Core Requirements (https://catalog.uta.edu/academicregulations/degreerequirements/generalcorerequirements/)		42
Students are required to complete specific courses in certain core areas.		
For Communication select:		
ENGL 1301	RHETORIC AND COMPOSITION I	
An additional communication area course		
For Life & Physical Science select:		
BIOL 1441	BIOLOGY I FOR SCIENCE MAJORS: CELL AND MOLECULAR BIOLOGY	
BIOL 1442	BIOLOGY II FOR SCIENCE MAJORS: ECOLOGY AND EVOLUTION	
For Mathematics select:		
MATH 1421	PREPARATION FOR CALCULUS	
MATH 1426	CALCULUS I	
For Social & Behavioral Sciences select:		
PSYC 1315	INTRODUCTION TO PSYCHOLOGY	
Data Science Foundations		
Additional hours required in core.		4
UNIV 1131	STUDENT SUCCESS	1
or UNIV-SC 1101	CAREER PREPARATION AND STUDENT SUCCESS	
Select any course numbered 3300 or higher.		3
Data Science Specialization		
DATA 3401	PYTHON FOR DATA SCIENCE 1	4
DATA 3402	PYTHON FOR DATA SCIENCE 2	4
DATA 3311	MATHEMATICS FOR DATA SCIENCE	3
DATA 3421	DATA MINING, MANAGEMENT, AND CURATION	4
DATA 3441	STATISTICAL METHODS FOR DATA SCIENCE 1	4
DATA 3442	STATISTICAL METHODS FOR DATA SCIENCE 2	4
DATA 3461	MACHINE LEARNING	4
DATA 4380	DATA PROBLEMS	3
DATA 4381	DATA CAPSTONE PROJECT 1	3
DATA 4382	DATA CAPSTONE PROJECT 2	3
Psychology Specialization		
PSYC 3200	EXPERIENCING RESEARCH IN PSYCHOLOGY	2
PSYC 3300	RESEARCH METHODS IN PSYCHOLOGY	3
PSYC 3315	SOCIAL PSYCHOLOGY	3
PSYC 3322	BRAIN AND BEHAVIOR	3
PSYC 3334	COGNITIVE PROCESSES	3

PSYC 4281	RESEARCH IN PSYCHOLOGY	2
Select one three-hour lecture course from each of the Groups I, II, and III; plus one three-hour course from either Group I, II, or III:		12
Group I		
PSYC 3310	DEVELOPMENTAL PSYCHOLOGY	
PSYC 3312	SOCIAL & PERSONALITY DEVELOPMENT	
PSYC 3314	PSYCHOLOGY OF PERSONALITY	
PSYC 3319	PSYCHOLOGY OF ADOLESCENCE	
Group II		
PSYC 3304	ANALYSIS & MANAGEMENT OF BEHAVIOR	
PSYC 3320	BEHAVIOR AND MOTIVATION	
PSYC 3326	ANIMAL BEHAVIOR	
PSYC 3356	EVOLUTIONARY PSYCHOLOGY	
PSYC 4309	NEUROPHARMACOLOGY	
Group III		
PSYC 3317	INTRODUCTION TO CLINICAL AND COUNSELING PSYCHOLOGY	
PSYC 3318	ABNORMAL PSYCHOLOGY	
PSYC 4332	THEORIES OF HUMAN LEARNING AND MEMORY	
PSYC 4357	HEALTH PSYCHOLOGY	
Select any PSYC Course numbered 3300 or higher		3
Select any PSYC course numbered 3300 or higher or DATA course numbered 2300 or higher		3
Total Hours		**120**

SUGGESTED COURSE SEQUENCE

Details of a personal course sequence should be made with the guidance of the Data Science undergraduate advisor, particularly since many courses are not offered every semester. For all entering freshmen, it is important to begin the mathematics sequence, starting with MATH 1421, Preparation for Calculus, in the first semester.

First Year

Fall Semester	Hours	Spring Semester	Hours
UNIV 1131 or UNIV-SC 1101	1	BIOL 1442	4
BIOL 1441	4	MATH 1426	4
PSYC 1315	3	DATA 3311	3
MATH 1421	4	DATA 3401	4
Component Area Course (Suggested DATA 1301)	3		
	15		**15**

Second Year

Fall Semester	Hours	Spring Semester	Hours
ENGL 1301	3	Approved Communication Core	3
PSYC 3300	3	PSYC 3200	2
PSYC 3315	3	PSYC 3322	3
DATA 3402	4	PSYC 3334	3
ELECTIVE (33xx+)	3	DATA 3421	4
	16		**15**

Third Year

Fall Semester	Hours	Spring Semester	Hours
HIST 1301	3	Approved Language, Philosophy, Culture Core	3
ADVANCED COURSE GROUP 1 (PSYC 33xx+)	3	ADVANCED COURSE GROUP 3 (PSYC 33xx+)	3
DATA 3461	4	ADVANCED COURSE GROUP 2 (PSYC 33xx+)	3
DATA 3441	4	DATA 3442	4
		DATA 4380	3
	14		**16**

Fourth Year

Fall Semester	Hours	Spring Semester	Hours
Approved Creative Arts Core	3	HIST 1302	3

POLS 2311	3	POLS 2312	3
Elective (PSYC 33xx+)	3	PSYC 4281	2
ADVANCED COURSE GROUP 1, 2 or 3 (PSYC 33xx+)	3	ELECTIVE (PSYC 33xx+ or DATA 23xx+)	3
DATA 4381	3	DATA 4382	3
	15		**14**

Total Hours: 120

Advising Resources

UNDERGRADUATE AND GRADUATE ADVISING

Location:

Life Science Building Room 206A and 206B

Email:

data.advising@uta.edu

Phone:

817-272-1512

Web:

Speak to an advisor in the Division of Data Science or schedule an appointment. (https://www.uta.edu/academics/schools-colleges/science/departments/division-data-science/advising/)