

Behavioral and Social Data Science, Humanities (BSBSDS)

This program is designed for students interested in analyzing human cultural artifacts, based on language, visual, or material culture. This concentration offers interdisciplinary training at the intersection of data analytics and the Humanities: literatures, art, and culture. Students will learn to design, plan, and implement Digital Humanities research projects, monitor results, and critically reflect and interpret data, methods, and technology as part of society and culture.

This introduces students to the fundamentals of data science and provides practice in data analytics as a humanities activity. Students will gain familiarity with data concepts, practice in data analysis processes, data curation and digital archives, AI applications, and critical reflections of technology and AI, and consider the wider cultural effects of data studies in the humanities. Students will think creatively and critically about the intersection of data analytics and the humanities and how to work with a variety of data types, such as literary and historical texts, art images and photographs, music and podcasts, and film. Students are also trained in experimental design and ethics, enabling them to evaluate new research findings and communicate their findings.

What distinguishes this concentration is that it provides significant training in the analysis and understanding of human culture and cultural artifacts – at the level of the individual, social group and society. Students who successfully complete this program will develop a technical toolkit to tackle the most ambitious problems involving human culture and help create the next-generation data science workforce. Training will be offered in the curation, visualization, analysis, and ethical treatment of real-world data using programming languages including R and Python, and using technology architectures and stacks ranging from different types of databases to ML/AI based methods and embedded systems. The program is designed to prepare graduates primarily for entry-level data science careers in industry, cultural institutions, and the arts although positions in other settings, such as government, nonprofit agencies, universities, and other research settings, may also be appropriate.

Total Hours Required: 120

Plan of Study

The Plan of Study is a suggested four-year course sequence to support academic planning and serves as a helpful guide. Currently enrolled students should meet with their academic advisor to tailor their course selections and timelines to their individual goals and circumstances.

Course	Title	Hours
Year 1		
Semester 1		
<u>First-Year Signature Course (090)</u>		3
RHE 306	Rhetoric and Writing	3
BHD 301	Introduction to Humanities Data Science	3
SDS 302F	Foundations of Data Analysis ((or Hours chosen from: Approved list))	3
<u>Natural Science and Technology, Part I (030)</u>		3
Hours		15
Semester 2		
<u>Natural Science and Technology, Part I (030)</u>		3
<u>Visual and Performing Arts (050)</u>		3

<u>Cultural Expression, Human Experience, and Thought (may not also be counted toward Core Curriculum)</u>		3
C S 303E	Elements of Computers and Programming	3
BHD 315	Programming for Humanities Data Science	3
Hours		15
Year 2		
Semester 1		
C S 313E	Elements of Software Design	3
<u>American and Texas Government (070)</u>		3
BHD 319	Gateway to Humanities Data Science	3
or E 310D	or Introduction to Digital Studies	
<u>Foreign Language other than English, Intermediate Proficiency</u>		6
Hours		15
Semester 2		
Hours chosen from: Research and design methods		3
PSY 420M	Psychological Methods and Statistics	
SOC 320T	Qualitative Methods for Social Research	
or URB 315	or Urban Studies Research Methods	
or WGS 356	or Introduction to Feminist Research Methods	
Hours chosen from: Approved list		
<u>Natural Science and Technology, Part II (093)</u>		3
<u>American and Texas Government (070)</u>		3
<u>Foreign Language other than English, Intermediate Proficiency</u>		6
Hours		15
Year 3		
Semester 1		
Hours chosen from: Lower-division humanities		3
Hours chosen from: Lower-division humanities		3
<u>U.S. History (060)</u>		3
BHD 321	Research Methods for Humanities Data Science	3
Hours chosen from: Data science fundamentals		3
ECO 342M	Applied Econometrics and Data Analysis	
or LIN 350.12	or Analyzing Text Data: A Statistics Toolkit for Linguists	
or PSY 371F	or Psychological Data Science Foundations II	
Hours chosen from: Approved list		
Hours		15
Semester 2		
Hours chosen from: Data science fundamentals		3
ECO 342M	Applied Econometrics and Data Analysis	
or LIN 350.12	or Analyzing Text Data: A Statistics Toolkit for Linguists	
or PSY 371F	or Psychological Data Science Foundations II	
Hours chosen from: Approved list		
Hours chosen from: Computer science		3
C S 323E	Elements of Scientific Computing	
or C S 324E	or Elements of Graphics and Visualization	
or C S 326E	or Elements of Networking	
or C S 327E	or Elements of Databases	
or C S 329E	or Advanced Topics in Elements of Computing	
Hours chosen from: Approved list		
BHD 350	Project Management for Humanities Data Science	3
<u>U.S. History (060)</u>		3
Hours chosen from: Methods		3
AMS 370.66	Art and Data in the Digital Age	
or GRG 310C	or Spatial Data and Analysis	
or E 310D	or Introduction to Digital Studies	
or GSD 351D	or Identity, Codes, and Culture	
Hours chosen from: Approved list		
Hours		15
Year 4		
Semester 1		
Hours chosen from: Methods		3
AMS 370.66	Art and Data in the Digital Age	
or GRG 310C	or Spatial Data and Analysis	
or E 310D	or Introduction to Digital Studies	
or GSD 351D	or Identity, Codes, and Culture	
<u>Additional Social Science (may not also be counted toward Core Curriculum)</u>		3

Humanities (040)	3
Hours chosen from: Applied digital studies I	6
GRG 324E Applications and Ethics of Digital Spatial Technologies or RHE 312 or E 341T or Writing in Digital Environments or Digital Theatres	
Hours chosen from: Approved list	
Hours	15
Semester 2	
Hours chosen from: Applied digital studies I	3
GRG 324E Applications and Ethics of Digital Spatial Technologies or RHE 312 or E 341T or Writing in Digital Environments or Digital Theatres	
Hours chosen from: Approved list	
Hours chosen from: Applied digital studies II	9
C C 370 Quantitative Criticism or RHE 330C.14 or Rhetorical Metrics or AFR 353C or Mapping Urban Destruction or HIS 324C or Mapping Urban Destruction	
Hours chosen from: Approved list	
GOV 362L Government Research Internship or L A 320D or Digital Humanities Internship	3
Hours	15
Total Hours	120

Requirements

All requirements are listed below, starting with the most specialized moving to the most general. Additional requirements may follow the table, so be sure to read the entire page. Some required courses listed below may also satisfy [General Education](#) requirements, including [Core Curriculum](#).

Code	Title	Hours
Concentration		
BHD 319	Gateway to Humanities Data Science	3
<i>Humanities</i>		
Hours chosen from: Lower-division humanities		6
Hours chosen from: Upper-division humanities		3
<i>Hours chosen from: Methods</i>		9
AMS 370.66	Art and Data in the Digital Age	
GRG 410C	Spatial Data and Analysis	
E 310D	Introduction to Digital Studies	
GSD 351D	Identity, Codes, and Culture	
Hours chosen from: Approved list		
<i>Hours chosen from: Applied Digital Studies I</i>		9
GRG 324E	Applications and Ethics of Digital Spatial Technologies	
RHE 312	Writing in Digital Environments	
E 341T	Digital Theatres	
Hours chosen from: Approved list		
<i>Hours chosen from: Applied Digital Studies II</i>		9
C C 370	Quantitative Criticism	
RHE 330C.14	Rhetorical Metrics	
AFR 353C	Mapping Urban Destruction	
HIS 324C	Mapping Urban Destruction	
Hours chosen from: Approved list		
<i>Hours chosen from: Capstone</i>		3
GOV 362L	Government Research Internship	
L A 320D	Digital Humanities Internship	
Approved hours (see advisor)		

<i>Subtotal</i>	42
Degree (see details below)	57
Free electives: Additional coursework to reach total hours required.	0
<i>Subtotal</i>	57
General Education	
<u>Remaining Core Curriculum (42 hours total)</u>	21
<i>Subtotal</i>	21
<u>College Requirements - Liberal Arts</u>	
<u>General University Requirements</u>	
Total Hours	120

Degree-Bachelor of Science in Behavioral and Social Data Science (BSBSDS)

Code	Title	Hours
Degree		
BHD 301	Introduction to Humanities Data Science	3
Hours chosen from: Statistics		3
PSY 317L	Introduction to Statistics for the Behavioral Sciences	
PSY 317L	Introduction to Statistics for the Behavioral Sciences	
BME 335	Engineering Probability and Statistics	
ECO 329	Economic Statistics	
ECE 351K	Probability and Random Processes	
M 358K	Applied Statistics	
M 378K	Introduction to Mathematical Statistics	
M E 335	Engineering Statistics	
SDS 320E	Elements of Statistics	
Hours chosen from: Approved list		
Hours chosen from: Programming		3
PSY 371E	Psychological Data Science Foundations I	
SDS 313	Introduction to Data Science	
RHE 314	Computer Programming for the Humanities	
Hours chosen from: Approved list		
Hours chosen from: Research design and methods		3
PSY 420M	Psychological Methods and Statistics	
SOC 320T	Qualitative Methods for Social Research	
URB 315	Urban Studies Research Methods	
WGS 356	Introduction to Feminist Research Methods	
Hours chosen from: Approved list		
Hours chosen from: Data science fundamentals		6
ECO 342M	Applied Econometrics and Data Analysis	
LIN 350.12	Analyzing Text Data: A Statistics Toolkit for Linguists	
PSY 371F	Psychological Data Science Foundations II	
Hours chosen from: Approved list		
C S 303E	Elements of Computers and Programming	3
C S 313E	Elements of Software Design	3
Hours chosen from:		3
C S 323E	Elements of Scientific Computing	
C S 324E	Elements of Graphics and Visualization	
C S 326E	Elements of Networking	
C S 327E	Elements of Databases	
C S 329E	Advanced Topics in Elements of Computing (any topic)	

Hours chosen from: Approved list		
Hours chosen from: Research Project Management/Research Data Management/Legal Aspects		3
BHD 350	Project Management for Humanities Data Science	
PSY 341K	Selected Topics in Psychology (any topic)	
PSY 371Q	Ethics in Behavioral Data Science	
<i>Subtotal</i>		<i>30</i>
<i>Literature and Writing</i>		
RHE 306	Rhetoric and Writing	3
Hours chosen from: <u>Writing intensive coursework-see course list</u> (may also be counted toward Core Curriculum; Plan II honors requires a minimum grade of C-)		3
Hours chosen from: Upper-division <u>Writing intensive coursework-see course list</u> (may also be counted toward Core Curriculum; Plan II honors requires a minimum grade of C-)		6
E 316L	British Literature	3
or E 316M	American Literature	
or E 316N	World Literature	
or E 316P	Masterworks of Literature	
Foreign Language other than English, Intermediate Proficiency		6
<u>Additional Social Science (may not also be counted toward Core Curriculum)</u>		3
<u>Cultural Expression, Human Experience, and Thought (may not also be counted toward Core Curriculum)</u>		3
Total Hours		57

Additional Requirements and Policy

At least:

- 39 upper-division hours are required.
- 36 lower- or upper-division hours must be completed in residence
- 24 upper-division hours must be completed in residence.

Students in this program may pursue any Bachelor of Arts honors program in the college except for Plan II Honors.

Hours may be counted toward more than one requirement only in the following cases:

1. Hours that fulfill Core Curriculum may also be counted toward specific degree requirements unless otherwise stated.
2. Up to 3 hours counted toward the degree or Core Curriculum may also be counted toward a minor or certificate. Completion of a transcript-recognized minor or certificate is not a requirement of the degree, but may be earned.