

B.S. in Data Science

Worldwide Program Requirements

General Education Requirements	39
Core Requirements	31
Area of Concentration	19
Minor	15-22
Open Electives	9-16
Total Credits	120

Program Details

The Bachelor of Science in Data Science requires successful completion of a minimum of 120 credit hours. Students enrolled in the Worldwide Undergraduate Online program may complete the degree in 20 terms, or approximately four years, assuming full-time enrollment and continuous progress. Students pursuing this undergraduate degree must earn a minimum cumulative grade point average (CGPA) of 2.00 for all work completed at the University. The courses required to earn this degree are listed below.

Students should be aware that many courses have prerequisites and/or corequisites. Students are responsible for ensuring that all prerequisite and degree requirements are satisfied prior to enrollment in advanced coursework. The suggested plan of study is provided as a guide. A student's actual plan of study may vary based on term of admission, course availability, transfer credit, and other academic considerations. Students should consult with their academic advisor to develop an individualized plan of study.

Students are required to complete an approved minor in consultation with their academic advisor. The Applied Data Science and Mathematics minors may not be selected to fulfill this requirement. The selected minor should complement the student's academic interests and career goals while satisfying degree requirements.

General Education Requirements

Communication	9
COMM 122 English Composition	
COMM 219 Speech	
COMM 221 Technical Communication	
Humanities - Lower Level	3
Social Sciences - Lower Level	3
Humanities/Social Sciences - Lower or Upper Level	3
Humanities/Social Sciences - Upper Level	3
Computer Science/Information Technology	3
CPSC 223 Scientific Programming in C	
Mathematics	8
MATH 241 Calculus and Analytical Geometry I	
MATH 242 Calculus and Analytical Geometry II	
Physical/Life Sciences	7
Total Credits	39

Core Requirements

CPSC 222	Introduction to Discrete Structures	3
CPSC 225	Computer Science II	3
CPSC 315	Data Structures and Analysis of Algorithms	3
CPSC 317	Files and Database Systems	3
DSCI 412	Data Visualization	3
DSCI 413	Statistics for Data Science	3
DSCI 491	Applied Data Science Capstone	3
MATH 243	Calculus and Analytical Geometry III	4
MATH 392	Applied Linear Algebra	3

MATH 412	Probability and Statistics	3
Total Credits		31

Area of Concentration

Applied Data Science

CPSC 251	Introduction to Programming for Data Science	3
CPSC 399	Special Topics in Computer Science	3
DSCI 201	Introduction to Data Science Applications	3
DSCI 310	Data Storytelling	3
DSCI 440	Data Mining	3
MATH 345	Differential Equations and Matrix Methods	4
Total Credits		19

Minor

All Students Must Declare and Complete a Minor	15-22
Total Credits	15-22

Open Electives

Open Electives - Upper Level *	
Open Electives - Lower or Upper Level *	
Total Credits	9-16*

* Open Elective Credits will vary based on Minor selected

Suggested Plan of Study

Year One

Requirements	Credits
CPSC 251 - Introduction to Programming for Data Science	3
MATH 241 - Calculus and Analytical Geometry I	4
Semester Hours	7

Requirements	Credits
DSCI 201 - Introduction to Data Science Applications	3
MATH 242 - Calculus and Analytical Geometry II	4
Semester Hours	7

Requirements	Credits
Humanities - Lower Level	3
MATH 243 - Calculus and Analytical Geometry III	4
Semester Hours	7

Requirements	Credits
Physical/Life Sciences	3
COMM 122 - English Composition	3
Semester Hours	6

Requirements	Credits
COMM 219 - Speech	3
Social Science – Lower Level	3
Semester Hours	6

Total Credits

Total Hours for All Requirements: 33

Year Two

Requirements	Credits
Physical/Life Sciences	3
Physical/Life Sciences Lab	1
Semester Hours	4

Requirements	Credits
MATH 345 - Differential Equations and Matrix Methods	4
COMM 221 - Technical Communication	3
Semester Hours	7

Requirements	Credits
MATH 392 - Applied Linear Algebra	3
MATH 412 - Probability and Statistics	3
Semester Hours	6

Requirements	Credits
DSCI 413 - Statistics for Data Science	3
DSCI 310 - Data Storytelling	3
Semester Hours	6

Requirements	Credits
Humanities/Social Science – Lower or Upper Level	3
Minor/Open Elective	4
Semester Hours	7

Total Credits

Total Hours for All Requirements: 30

Year Three

Requirements	Credits
CPSC 222 - Introduction to Discrete Structures	3
CPSC 223 - Scientific Programming in C	3
Semester Hours	6

Requirements	Credits
CPSC 225 - Computer Science II	3
Minor/Open Elective	3
Semester Hours	6

Requirements	Credits
CPSC 315 - Data Structures and Analysis of Algorithms	3
DSCI 412 - Data Visualization	3
Semester Hours	6

Requirements	Credits
CPSC 317 - Files and Database Systems	3
Minor/Open Elective	3
Semester Hours	6

Requirements	Credits
Minor/Open Elective	3
Humanities/Social Sciences - Upper Level	3
Semester Hours	6

Total Credits

Total Hours for All Requirements: 30

Year Four

Requirements	Credits
CPSC 399 - Special Topics in Computer Science	3
Minor/Open Elective	3
Semester Hours	6

Requirements	Credits
Minor/Open Elective	3
Minor/Open Elective	3
Semester Hours	6

Requirements	Credits
DSCI 440 - Data Mining	3
Minor/Open Elective	3
Semester Hours	6

Requirements	Credits
Minor/Open Elective	3
Minor/Open Elective	3
Semester Hours	6

Requirements	Credits
DSCI 491 - Applied Data Science Capstone	3
Semester Hours	3

Total Credits

Total Hours for All Requirements: 27

Estimated Cost of Attendance

Estimated Cost of Attendance: California Student Information (<https://catalog.erau.edu/student-life/student-affairs/california-student/>)