

B.S. in Data Science

Prescott Program Requirements

General Education Requirements	40
Core Requirements	32
Program Support	19
Track Electives	15
Open Electives	15
Total Credits	121

Program Details

The Bachelor of Science in Data Science program requires successful completion of a minimum of 121 credit hours. The program may be completed in eight semesters, or four years, assuming appropriate background and full-time enrollment. Students pursuing this undergraduate degree must earn a minimum cumulative grade point average (CGPA) of 2.00 for all work completed at the University. Students are required to complete a track of specialization and may select coursework from disciplines such as Business, Computer Science, Cyber Security, Economics, Intelligence, Mathematics, Physics, or Psychology, subject to program approval. The courses necessary to earn this degree are listed below.

Students should be aware that many courses have prerequisites and/or corequisites. Students are encouraged to participate in applied practicum experiences, such as internships, cooperative education opportunities, or undergraduate research, to gain practical experience and enhance career readiness.

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 118 Fundamentals of Computer Programming	
Mathematics	8
MATH 241 Calculus and Analytical Geometry I	
MATH 242 Calculus and Analytical Geometry II	
Physical/Life Sciences	8
Two Courses Must Include Labs	
Total Credits	40

Core Requirements

CPSC 222 Introduction to Discrete Structures	3
CPSC 125 Computer Science I	3
CPSC 125L Computer Science I Laboratory	1
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 490 Data Science Capstone	3
MATH 243 Calculus and Analytical Geometry III	4
MATH 335 Introduction to Linear and Abstract Algebra	3

MATH 412 Probability and Statistics	3
Total Credits	32

Program Support Courses

DSCI 150 Data Science I: Introduction	3
DSCI 151 Data Science II: Foundations	3
DSCI 244 Data Acquisition and Manipulation	3
DSCI 312 Machine Learning	3
DSCI 317 Statistical Software	3
DSCI 483 Cloud Computing	3
UNIV 101 College Success	1
Total Credits	19

Track Electives

Choose 5 electives from a single discipline, subject to Program Chair approval, including:	15
Business, Computer Science, Cyber Security, Economics, Intelligence, Math, Physics, or Psychology	
Total Credits	15

Open Electives

Open Electives - Upper Level	6
Social Science (SOSC) - Upper Level	3
CISE 460 Big Data Analytics and Machine Learning	3
SFTW 300 Software Engineering Practices	3
Total Credits	15

Suggested Plan of Study

Year One

Requirements	Credits
COMM 122 - English Composition	3
CPSC 118 - Fundamentals of Computer Programming	3
DSCI 150 - Data Science I: Introduction	3
MATH 241 - Calculus and Analytical Geometry I	4
UNIV 101 - College Success	1
Semester Hours	14

Requirements	Credits
COMM 219 - Speech	3
CPSC 125 - Computer Science I	3
CPSC 125L - Computer Science I Laboratory	1
DSCI 151 - Data Science II: Foundations	3
MATH 242 - Calculus and Analytical Geometry II	4
Humanities - Lower Level	3
Semester Hours	17

Total Credits

Total Hours for All Requirements: 31

Year Two

Requirements	Credits
CPSC 222 - Introduction to Discrete Structures	3

MATH 243 - Calculus and Analytical Geometry III	4
Physical/Life Sciences with Lab	4
Social Sciences - Lower Level	3
Track Elective	3
Semester Hours	17

Requirements	Credits
DSCI 244 - Data Acquisition and Manipulation	3
MATH 335 - Introduction to Linear and Abstract Algebra	3
MATH 412 - Probability and Statistics	3
SFTW 300 - Software Engineering Practices	3
Track Elective	3
Semester Hours	15

Total Credits

Total Hours for All Requirements: 32

Year Three

Requirements	Credits
COMM 221 - Technical Communication	3
CPSC 315 - Data Structures and Analysis of Algorithms	3
DSCI 312 - Machine Learning	3
Phsyical/Life Sciences with Lab	4
Track Elective	3
Semester Hours	16

Requirements	Credits
CISE 460 - Big Data Analytics and Machine Learning	3
DSCI 317 - Statistical Software	3
DSCI 413 - Statistics for Data Science	3
Humanities/Social Sciences - Upper Level	3
Track Elective	3
Semester Hours	15

Total Credits

Total Hours for All Requirements: 31

Year Four

Requirements	Credits
CPSC 317 - Files and Database Systems	3
DSCI 412 - Data Visualization	3
DSCI 483 - Cloud Computing	3
Track Elective	3
Open Elective - Upper Level	3
Semester Hours	15

Requirements	Credits
DSCI 490 - Data Science Capstone	3
Social Sciences - Upper Level	3
Humanities - Upper Level	3

Open Elective - Upper Level	3
Semester Hours	12

Total Credits

Total Hours for All Requirements: 27