

**Northwest Arkansas Community College**  
Business and Computer Information Systems Division

**Discipline Code**

DASC

**Course Number**

1223

**Course Title**

Data Science in Today's World

**Catalog Description**

(F, S, On Demand) Data Science in Today's World (DASC 1222) is a survey course providing an overview of the Data Science Curriculum and an introduction to the essential elements of data science: data collection and management; summarizing and visualizing data; basic ideas of statistical inference; predictive analytics and machine learning. Students will continue their hands-on experience using the Python and R programming languages and Jupyter notebooks.

**Prerequisites**

PROG 1003 – Programming Logic I

DASC 1001 - Programming for Data Science

**Corequisites**

DASC 1003 – Introduction to Data Science

**Credit Hours**

3

**Contact hours**

45

**Load hours**

3 Load hour

**Semesters Offered**

Fall, Spring

**ACTS Equivalent**

None.

**Grade Mode**

A-F

## **Learning Outcomes**

### **Students completing DASC 1223 should be able to**

- list the steps involved in data science from data acquisition to insight and describe the role of each step;
- distinguish different ways of collecting data and their impact on the conclusions that can be drawn from the data;
- manage, summarize and visualize data using the Python and/or R programming languages and Jupyter notebooks;
- explain the basic concepts of statistical inference and implement simulation-based inference methods;
- apply predictive models and machine learning methods and assess the quality of predictions;
- communicate basic data science principles and methods to diverse audiences.

## **General Education Outcomes Supported**

- Students develop higher order thinking skills.
- Students will demonstrate technological fluency.
- Students demonstrate information literacy.

## **Standard Practices**

### **Topics list**

N/A

### **Learning activities**

Assignments and Projects.

This course requires some in class, hands-on work and also additional hands-on work in the virtual or on-campus computer lab.

### **Assessments**

Homework

Projects

Quizzes

Exams

### **Grading guidelines**

A = 90 – 100%

B = 80 – 89%

C = 70 – 79%

D = 60 – 69%

F = 0 – 59%