Course Syllabus Part II
DSC 500 – Introduction to Data Science
3 Credit Hours

Course Resources

Course Text(s):
Data Science for Business, What you Need to Know about Data Mining and Data-Analytic Thinking (1st Edition).
Foster Provost & Tom Fawcett.
O'Reilly
ISBN-13: 978-1449361327
ISBN-10: 1449361323

The Data Science Handbook: Advice and Insights from 25 Amazing Data Scientists.
Carl Shan, Henry Wang, William Chen, and Max Song
The Data Science Bookshelf
ISBN-10: 0692434879
ISBN-13: 978-0692434871

Everybody Lies: Big Data, New Data, and What the Internet Can Tell Us About Who We Really Are
Seth Stephens-Davidowitz.
Harper Collins
ISBN-10: 0062390864
ISBN-13: 978-0062390868

Required Resources:
In this course, you will need to be able to:

- Access the Internet.
- Access Cyberactive.
- Collaborate Online via Video and Voice.
- Collaborate while writing a single document.
- Submit a Word, Excel, or PowerPoint document.
- Access to GitHub account.

Course Schedule

Week	Topic	Reading Assignment
1	What is data science?	*Data Science Handbook:* Chapter 1 *Everybody Lies:* Chapters 1-4
2	The data science process/Data Science for the Individual	*Everybody Lies: Chapters 5-8*
3	Data Science for Business	*Data Science for Business* – Chapters 1-2 & 13-14 *Data Science Handbook:* Chapters 13 & 18
4	Data Science Ethics	*Data Science Handbook:* Chapters 9 & 20
5	Data Analysis: Modeling	*Data Science for Business* – Chapters 3-5 *Data Science Handbook:* Chapters 7 & 16
6	Data Analysis: Clusters	*Data Science for Business:* Chapters 6-7 *Data Science Handbook:* Chapters 10 & 23
7	Data Analysis: Probabilities	*Data Science for Business:* Chapter 9 *Data Science Handbook:* Chapters 21 & 22
8	Data Preparation & Data Quality	*Data Science Handbook:* Chapters 3 & 5
9	Data Visualization	*Data Science for Business:* Chapter 8 *Data Science Handbook:* Chapters 4 & 15
10	Big Data, Data Mining, Machine Learning & Artificial Intelligence	*Data Science for Business*: Chapters 10-12 *Data Science Handbook:* Chapters 8 & 24
11	Data Science Roles	*Data Science Handbook:* Chapters 2, 6 & 12
12	Tools & Software	No assigned book reading

Course Activities

In this section of the syllabus, I will describe what we will be doing in each of the activities for each week. Specifically, I will be describing your deliverables – those items you need to submit at or before the deadline. You can find more detail on grading criteria for each category by viewing its detailed rubric.

Discussion/Participation

Every week you will be required to make 10 posts via an online platform. The goal is to simulate real world discussion and participation – there will not be formal posts required or required topics to discuss. There may be optional topics provided to start discussion, however, sharing information, troubleshooting, asking questions/feedback, etc. will be the primary focus for discussion/participation. Discussion/Participation will be graded as follows:

# of Posts	Percentage
0	0%
5	50%
10	100%

Exercises

Each week, you will be assigned an exercise or series of exercises based on the weekly topic to complete and submit to the assignment link. These are not group assignments to complete and should be done on your own. However, if you have questions about a specific method or function, you are encouraged to use the discussion board or Slack to discuss with your classmates, without completing the assignment together.

Term Project

Over the course of the term, you will be working on a project proposal that has 4 milestones. Each will be submitted separately with the final project submitted the last week of the course.

Week #	Discussion/Participation	Exercise	Project Milestone
Week 1	X	X	
Week 2	X	X	
Week 3	X	X	X
Week 4	X	X	
Week 5	X	X	
Week 6	X	X	X
Week 7	X	X	
Week 8	X	X	
Week 9	X	X	X
Week 10	X	X	
Week 11	X	X	
Week 12	X	X	X

Grade and Point Breakdown

Component:	Percentage	Point Value Each Week	Number of Times	Total
Discussion/Participation	45%	90 Points	10 Posts Per Week	1080
Exercises	25%	50 Points	1 Submission 12x	600
Term Project	30%	180 Points	4 Milestones, 180 points each	720
			Total Points	2400

Late Work

Late work is not accepted unless arrangements are made with the instructor for *very* special,

unavoidable circumstances. If you do not alert the professor before or shortly after something that will make you late, the chances of special arrangements are much lower. If in doubt, please email as soon as possible.

Participation

Students are required to login often and contribute to the class on a regular basis, including posting in the online platform, submitting assignments, and participating in group activities as required. If you have specific participation requirements related to your educational funding or student status, you are expected to monitor your own participation to ensure you are in compliance with those requirements.

Expectations for Students

- Students should expect to spend approximately 10-15 hours per week to complete the activities and assignments in this course.
- Students will log in as often as needed to complete their assignments and progress through the course.
- Students will treat their classmates and the instructor with respect and courtesy.
- Students are responsible for keeping current with the reading assignments and coming to class prepared to discuss the work assigned.
- Students are responsible for knowing what assignments are due and when.
- Students will submit only their own work and will not commit plagiarism or other acts of academic dishonesty.
- Students will contact the instructor as soon as personal problems arise that may affect the student's ability to complete assignments on time.

Expectations for Faculty

- The instructor will treat all students with respect and courtesy.
- The instructor will make grading criteria clear and follow the criteria scrupulously in evaluating student work.
- The instructor will provide feedback about student work within 6 days of due dates (or 24 hours prior to the next due date)—feedback that helps the student learn and improve.
- The instructor will respond to all student messages within 48 hours.