

Draft

MT 122-51
Elementary Statistics I
Summer I, 2014 (May 12—June 12)

Instructor: Dr. Carl Spitznagel

Course Format: This is an asynchronous, online course. Later in this syllabus you will find the schedule of dates and times by which you must complete the assigned work. You are free to work ahead of this schedule if you wish, but exams must be taken at the times indicated in the schedule below. I will proctor in-person exams at John Carroll University during those times, and if it is possible for you to take the exams on campus, that will be preferable for you as well as for me. If it is not possible for you to take the exams in person at JCU, then you will be responsible for arranging to take the exams in a proctored setting that I approve ahead of time. More information can be found in the section on Off-Campus Exams, below.

Daily Work: If taught face-to-face at JCU, this class would meet four days a week for two hours and ten minutes per day. You should therefore expect to devote this amount of time to reading the text for this course. Moreover, a standard guideline for the workload in college courses is two hours of outside work for every hour in class. This means that you should realistically expect to be spending—each day—an additional 4 to $4\frac{1}{2}$ hours of solid work on activities to help you learn and master the material. These activities, which include videos, online quizzes, online homework and written homework, are detailed in the Course Schedule document. (An abbreviated outline of the course schedule can be found at the end of this syllabus. See the course Blackboard site for the complete document.) You should therefore expect to devote about 6-7 hours of solid work per day, four days each week, on this course. This is why success in an online course—especially during an abbreviated summer term—requires a serious commitment and a great deal of motivation.

Materials Required: The required “text” for the course is the online system StatsPortal for *The Basic Practice of Statistics*, 6th ed., by Moore, Notz and Fligner (Freeman). This is a software system that includes an electronic copy of the book, along with many other learning features that you will use on a regular basis. You may purchase access online at <http://portals.bfwpub.com/bps6e>. Since StatsPortal includes an eBook, it is not necessary to purchase a physical book. If you do wish to purchase a physical book, however, the ISBN to search for is 1464102546.

Electronic Course Access: All course documents not found on StatsPortal will be available through John Carroll University’s Blackboard course management system. As soon as you are officially registered in the course through John Carroll, you will be able to begin to access the course materials, at the web site <http://blackboard.jcu.edu>. You will be able to access StatsPortal either directly (using the link <http://portals.bfwpub.com/bps6e>), or through Blackboard. Because of the browser requirements of StatsPortal, **you must use Firefox as your browser**. Do not attempt to use any other browser, as you are almost certain to encounter difficulties. If you do

not already have Firefox on your computer, you can download it for free at <http://www.mozilla.org/en-US/>.

Communication Information: I will hold online office hours daily, Monday through Thursday, starting on May 12, from 12:00 noon to 1:30 pm, EDT. If you wish to contact me by other means, my office phone number is 216-397-4683, and my e-mail address is spitz@jcu.edu.

Periodically, I will post announcements to the class on Blackboard, and may also send e-mail to the class through Blackboard. Since Blackboard utilizes your JCU e-mail address, it is important for you to assure that you can receive e-mail at that address, and use it for all of your course-related correspondence. If you are new to JCU and don't know your JCU e-mail address, contact the JCU Information Services Help Desk at 216-397-3005, to determine your JCU e-mail address and password. After that, be sure to check your JCU e-mail regularly.

Content and Purpose: The purpose of this course is to introduce you to statistical methods for describing and analyzing data, including exploratory data analysis and elementary inferential procedures. You will also learn to use statistical software, both as a computational tool and as an aid to understanding statistical concepts. Topics covered in the course include distribution and graphical representation of data; measures of center, position and spread; correlation and simple linear regression; sampling; design of experiments; basic probability; estimation and tests of hypotheses based on the normal, t and chi-square distributions, including inferences about means, proportions and independence.

Exams: There will be three exams, held from 12:00 noon until 1:30 pm EDT, on the following days. Be sure to bring a photo ID with you to the exams.

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| Exam 1: | Wednesday, May 21 (covering material from Chapters 1—5) |
| Exam 2: | Tuesday, June 3 (covering material from Chapters 8—16) |
| Exam 3: | Thursday, June 12 (covering material from Chapters 18—23) |

I expect that you will take the exams at these times (either in person in room Dolan E243 at John Carroll University), or under proctored conditions described in the next paragraph. Only extraordinary circumstances warrant permission to take an exam at a different time, and you must secure my permission for this in advance of the scheduled exam date.

Off-Campus Exams: If you must take an exam off-campus, you must arrange for exam proctoring through an approved higher education institution. Any off-campus exams must begin between 12:00 noon and 1:30 pm EDT on the dates listed above. Many community colleges and branch campuses of large universities provide this service, for which you will be required to pay whatever fee they charge. On the course Blackboard site you will find an **Online Proctored Exam Request Form**, which you must complete and send to me at least 4 days prior to each exam. I will make the exam available to the proctor a minimum of two hours before the exam begins. After the exam, the proctor must scan and e-mail it (as a pdf file) to me, and then send the paper copy of the exam to me by US Mail.

Technology: You must have regular access to a computer with a broadband internet connection, in order to access the e-book and other learning features of StatsPortal. As indicated above, the only browser that will work properly with the software for this course is Firefox. Be sure to go through the **Technology Checklist** (posted on Blackboard) to be sure that you have the other necessary technology components. You may also find it helpful—although not absolutely essential—to have a calculator with statistical capabilities, such as a TI-84.

Assignments: A substantial portion of your learning in this course will take place through the assignments, and for this reason it is essential that you be conscientious about doing them. Assignments will be given daily through StatsPortal, which you will also use to submit your solutions. This system will give you feedback on the correctness of your answers, and will record your grade on the assignment.

In addition to the daily StatsPortal assignments there will be a smaller assignment each week, which you will complete in writing, in the usual fashion. On these written assignments you will be expected to use your very best mathematical exposition, and write your solutions completely and clearly. The primary reason for the weekly written homework is to help you to learn to express statistical ideas clearly in writing, so these problems will be graded both on correctness and on clarity of expression. Written assignments must be completed on paper, using either word processing software or dark pencil or pen. After writing your solutions, you must create a **pdf document** from your work, and send it to me as an attachment in an e-mail message, prior to the time due. If you are typing your solutions using word processing software, you should be able to save your document directly as a pdf file. In case you are hand writing your solutions, be sure to write on only one side of the paper. Most scanners or all-in-one printers can create pdf files. *Be sure to practice this well in advance of the time your work is due*, to assure that you understand the process. I would be happy to respond to a trial page, to assure you that your work will be legible when I receive it.

An abbreviated schedule of due dates and times for assignments can be found in the **Abbreviated Course Schedule** section below.

Getting Help: I am very happy to provide help with understanding the readings, and with homework problems or other course-related matters. I will generally be available for online office hours (through Blackboard) from 12:00 noon until 1:30 pm EDT, Monday through Thursday during the weeks that the course meets.

Academic Honesty: Academic honesty, expected of every student, is essential to the process of education and to upholding high ethical standards. Cheating or any other kind of unethical behavior will subject a student to severe academic penalties, ranging from a grade of 0, failure of the course, or suspension or expulsion from the University. Please consult the discussion of Academic Honesty in the Undergraduate Bulletin for more details.

Students with Disabilities: If you have a documented disability, you may request accommodations from the office of Services for Students with Disabilities (SSD). Please contact the SSD coordinator at 397-4967 or visit the office, located in room 7A, on the Garden Level of the Administration Building. After your eligibility for accommodations is determined, you will

be given a letter which, when presented to me, will help me know best how to assist you. Please keep in mind that accommodations are not retroactive.

Grading: Your final grade is my evaluation of your total performance in four areas of scholarship: retention of substantial information, insight into the significance of this information, ability to apply it to new situations, and ability to communicate the knowledge assimilated. Tests will be designed to measure all four facets of scholarship, and will be graded accordingly. The following are rough guidelines for determining final grades.

Grade	Average	Weightings	
<i>A- to A</i>	90—100		
<i>B- to B+</i>	80—89	<i>Exams</i>	75 %
<i>C- to C+</i>	70—79		
<i>D- to D+</i>	60—69	<i>Assignments</i>	25 %
<i>F</i>	below 60		

Abbreviated Course Schedule (See Blackboard for the complete schedule.)

Day	Reading	Work Due		
		<i>Learning Curve (due by 11:00 pm EDT)</i>	<i>StatsPortal HW (due by 11:00 pm EDT)</i>	<i>Written HW (due via e-mail by 1:30 pm EDT)</i>
Week 1				
M 5/12	Ch. 1	Ch.1		
T 5/13	Ch. 2	Ch. 2	HW1	
W 5/14	Ch. 3	Ch. 3	HW2	
H 5/15	Ch. 4	Ch. 4	HW3	
Week 2				
M 5/19	Ch. 5	Ch.5	HW4	Written HW1
T 5/20	Ch. 8-9	Ch. 8, Ch. 9	HW5	
W 5/21	Exam 1 on Ch. 1--5			
H 5/22	Ch. 10 -- 11	Ch. 11	HW8-9	Written HW2
Week 3				
M 5/26	Memorial Day			
T 5/27	Ch. 14	Ch. 14	HW10-11	
W 5/28	Ch. 15	Ch. 15	HW14	
H 5/29	Ch. 16	Ch. 16	HW15	Written HW3
Week 4				
M 6/2	Ch. 18	Ch. 18	HW16	
T 6/3	Exam 2 on Ch. 8--16			
W 6/4	Ch. 19	Ch. 19	HW18	
H 6/5	Ch. 20	Ch. 20	HW19	Written HW4
Week 5				
M 6/9	Ch. 21	Ch. 21	HW20	
T 6/10	Ch. 23	Ch. 23	HW21	
W 6/11	Catch-up day		HW23	Written HW5
H 6/12	Exam 3 on Ch. 18--23			