



## Community Colleges of Spokane

### SYLLABUS

**MATH& 146 Online – Statistics**

**Fall 2017**

<u>Instructor:</u>	Mrs. Barbara Harras
<u>Class Times &amp; Location:</u>	Online
<u>Office:</u>	SFCC Campus 18-212E
<u>Office Phone:</u>	509-533-3676
<u>E-mail:</u>	<a href="mailto:Barbara.Harras@sfcc.spokane.edu">Barbara.Harras@sfcc.spokane.edu</a>
<u>Office Hours:</u>	9:00 am – 11:30 am – M, T, R, F, Or by Appointment

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Official First Day of Class: Wednesday, September 20<sup>th</sup>

However, the course will be available to begin working Monday, September 18<sup>th</sup>

Last day to drop without W on transcript: Monday, October 9<sup>th</sup>

Last day to drop with W on transcript: Monday, November 13<sup>th</sup>

Final Exam Dates for course: December 11<sup>th</sup> or 12<sup>th</sup>

Last Day of Class: Friday, December 8<sup>th</sup>

Grades Available Online: Tuesday, December 19<sup>th</sup>

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Course Description: This course is an introduction to the fundamental principles and procedures of elementary statistical methods, including a study of frequency distribution, measures of central tendency, probability, statistical decision-making, hypothesis testing, estimation and prediction.

Prerequisites: MATH 088, 097, 098 or 099 with a 2.0 or better within the last three years or appropriate placement score.

Required Material:

1. **Required Online Text:** *Interactive Statistics: Informed Decisions Using Data 1/e* by Michael Sullivan III & George Woodbury – found online in our MyStatLab website
2. **Guided Notebook to Accompany *Interactive Statistics*** – available in the SFCC Bookstore.
3. **Access code for MyStatLab** – comes shrunk-wrapped with the Guided Notebook or you can purchase it online at [www.pearsonmylabandmastering.com](http://www.pearsonmylabandmastering.com).
4. **A graphing calculator is required**, although no other symbolic manipulators are allowed. I highly recommend a TI-83 Plus or TI-84 Plus calculator. Directions are included in our course.

MyStatLab Access Code: Please logon and enroll in MyStatLab immediately. For the initial logon, be very careful as the information you provide cannot be changed. **Please use your first and last name that you are enrolled with at the college.**

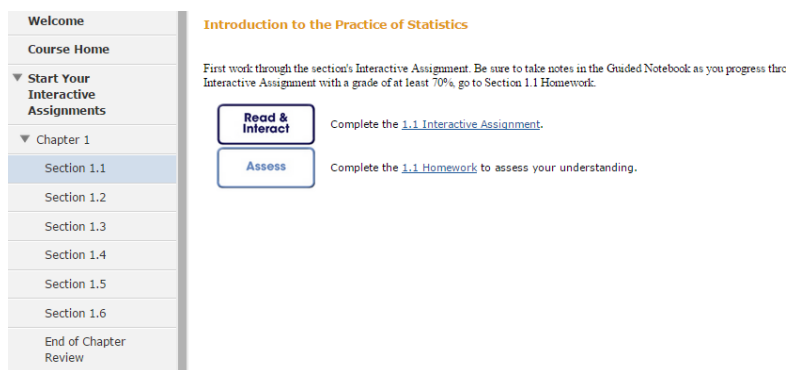
To register for Math& 146 Online Fall 2017 in MyStatLab:

- 1) Go to [www.pearsonmylabandmastering.com](http://www.pearsonmylabandmastering.com)
- 2) Under Register, select Student.
- 3) Confirm you have the information needed, then select OK! Register now.
- 4) Enter your **instructor's course ID: harras67478** and Continue.
- 5) Enter your existing Pearson account username and password to Sign In. You have an account if you have used a Pearson product, for example: MyMathLab, MyITLab, MyPsychLab, MySpanishLab or Mastering, such as MasteringBiology. If you don't have an account, select Create and complete the required fields.
- 6) Select an access option. Use the access code that came with your textbook or that you purchased separately from the bookstore or online. Buy access using a credit card or PayPal account. **If available**, you can also get 14 days temporary access for free. (The link is near the bottom of the screen.)
- 7) From the confirmation page, select Go To My Courses.
- 8) On the My Courses page, select the course tile **Math& 146 Online – Fall 2017** to start your work.

Course Structure: This course is delivered through an online course management system called MyStatLab. Within MyStatLab there is the **online & interactive text**. **Each section of the text that we are going to study has two parts.**

- **Part I – Interactive Reading Assignment (IRA):** The IRA is where the course content is delivered to you via reading assignments, video presentation, examples (also with video solutions), interactive activities, and assessment questions. **You earn points** by watching videos and completing the activities. Each interactive reading assignment is worth 2 points. There are 34 such assignments corresponding to the 34 sections that we will be studying for a possible total of 68 points for the IRA. Begin each section by working through the IRA. Some of the IRA's examples will have multiple video solutions. In this case, you should watch the StatCrunch (SC) and/or TI 83-84 Plus video solutions.
- **Guided Notebook:** I highly recommend that you use this notebook as a place where you can take notes on the information given in the **IRA** lectures by filling in all the information from the slides in the notebook. This will be a valuable resource for you as you work through the **Online Homework Assignment** for each section as well as the quizzes and tests over the corresponding material.

- Part II – Section Homework:** Upon completion of a section's IRA, you should jump to the **section's homework**. For example, in Chapter 1, you should begin with Section 1.1 by reading the IRA and then proceed to the 1.1 Homework. To move from the IRA in a section to the online homework for the section, **you must get at least 60% on the IRA (Interactive Reading Assignment)** for that section. In other words, for example, in order to do the online homework for section 1.1, you must receive at least 60% for the IRA for section 1.1. Each section's online homework is worth 4 points. Again there are 34 sections with homework assignments. The homework is worth 136 points toward your final grade. Problems can be worked on until a correct answer is obtained so there is no excuse for not getting 136/136 points!



**Navigation Within a Typical Section:** A majority of the sections begin with a list of prerequisite topics called *Preparing for this Section* that need to be understood to succeed in the section. There is a pop-up link that provides a brief review of the content and a MathXL exercise that assesses the student's understanding of the concept.

After, completing the *Preparing for this Section* MathXL exercises, the student is given a list of learning objectives for the section. These objectives are linked to the corresponding material in the section. To help with navigation, the Introduction and Objective numbers are tabbed across the top of the screen. The circles at the bottom of the screen indicate the number of slides in the tabbed content. A dark circle indicates the location of the slide currently being viewed within the tabbed content. Arrows may appear on either the left or right side of the slide. If no arrow appears, it means scrolling (forward if no arrow on the right/backward if no arrow on the left) is not possible. A gray arrow means scrolling forward/backward within the tabbed content is possible; a blue arrow means the end/beginning of the content is on the slide being viewed. Clicking a blue arrow will move the reader to another tab.

Introduction | Objective 1 | Objective 2 | Objective 3 | **Tab within section**

Objective 1: Find the Least-Squares Regression Line and Use the Line to Make Predictions

**OBJECTIVE 1 Find the Least-Squares Regression Line and Use the Line to Make Predictions**

The line that we found in Example 1 appears to describe the relation between club-head speed and distance quite well. However, is there a line that fits the data better? Is there a line that fits the data best?

Whenever we attempt to determine the best of something, we need a criterion for determining best. For example, suppose that we are trying to identify the best domestic car. What do we mean by *best*? Best gas mileage? Best reliability? When finding the best line for describing the relation between two variables, we need a criterion for determining the best line. Consider Figure 9.

**Driving Distance vs. Club-Head Speed**

Residual = Observed - Predicted  
= 274 - 269.3

(103, 274)  
(103, 269.3)

Blue arrow to scroll to previous tab

In Other Words

Gray arrow to scroll forward within tabbed content

Figure 9  
Each  $x$ -coordinate on the line corresponds to a predicted distance for a given club-head speed. For example, if club-head speed is miles per hour, the predicted distance is  $y$  yards. The observed distance for this club-head speed is  $y$  yards. The difference between the observed and predicted values is the error, or residual. For a club-head speed of miles per hour, the residual is  $y - \hat{y}$ .

Current slide within tab

There are a total of nine slides in this tab

**Communication:** If you ever need to communicate with me, it is best to email. You can expect a response back from me within 24 hours (usually less). I will send you weekly emails to the account you used to register for MyStatLab and post weekly announcements to MyStatLab (under Course Home) regarding schedule and assignments for the week. **Be sure to check your email and/or announcements page regularly.**

**StatCrunch, TI-83Plus, and TI-84, Plus:** We will be using the data analysis package StatCrunch in this course. StatCrunch is an online data analysis tool and much more. The URL for the program is [www.statcrunch.com](http://www.statcrunch.com). Included in your subscription to MyStatLab is the cost of StatCrunch. We will be using StatCrunch to obtain statistical results. We will also be using the calculator TI-83 Plus or TI-84 Plus. StatCrunch will not be available for the Final Exam; however, you will be able to use the statistical operations on your graphing calculator for the Final Exam. Instruction for the use of the TI-83 Plus and TI-84 Plus will be included with the Final Exam.

## Mathematics is not a spectator sport!!

So, the more time you spend with the material, the better.

### Additional Assessments:

- **Worksheets:** These are extremely important since they serve as part of the review for the test and are the best examples of what to expect on the Final Exam. They are due on the day before each of the tests. The problems come from the Guided Notebook as well as the online homework and quizzes. See **Documents>>Worksheets** for more information. I will alert you via email and course announcement about the nature/due date of each assignment. There will be 5 such worksheets throughout the quarter, with each worksheet being worth 25 points. The worksheet can be submitted to me by scanning in an e-mail to me, faxing it to me, dropping it off at the Building 18 office for placement in my mailbox, or sending it to

me in the US mail. **If you choose to use file upload in an e-mail, you should submit projects as a PDF or JPEG file and it should be a single upload – not each page separately!** There is a **free app** for smart phones called “**CamScanner**” that I like and recommend if you do not have access to a scanner/fax machine.

- **Quizzes:** There will be five online quizzes during the quarter. These quizzes will cover chapters 1, 3, 5, 7, and 9 respectively, and are worth 20 points each.
- **Tests:** There will be **five online tests** plus a **comprehensive, proctored, written final exam**. Each online test is worth 100 points and the Final Exam is worth 200 points. Each online test will cover two chapters. The Final Exam will be comprehensive and is to be taken in the Testing Center on the SFCC campus or an approved testing site near where you are located. The Final Exam is a written, pencil/paper exam. **For the Final Exam, you may bring in one 8.5” by 11” sheet of paper with formulas and notes written on both sides as well as a graphing calculator.**

Email:

- You are expected to read all emails promptly. Those sent to the entire class can be reviewed in Course Home/ Announcements by clicking the “View all announcements” button.
- If you have questions about your grade or any other personal matter, email me at [Barbara.Harras@sfcc.spokane.edu](mailto:Barbara.Harras@sfcc.spokane.edu). Please use **146/Your Name/Your Topic** as the subject line—I teach several online classes and don’t want to give you information about the wrong class. Be sure to use the address given. Otherwise it may not reach me.

Grading: Grading and assessment always seems to be one of the toughest topics for all online courses. The main question is: How does one ensure authentic work and quality learning? It should not be necessary to state that you are expected to do all your own work. Failure to do so will result in failing the class and being reported for disciplinary action. As with most online courses, this course will have a substantial amount of reading, assignments, quizzes, and exams. Points assigned to each of these items will be used to determine your overall grade for the course.

**There will also be a proctored Final Exam.** Since it will be the only time your identity will be verified, **it is important that your performance is consistent with the rest of your performance in the class.** There have been instances where the student enrolled in the course isn't doing the work independently. As you progress through the quarter, make a

practice of learning the material well enough so that you don't need to refer to the text. Don't make the mistake of relying on your text and notes for the online tests; you'll not be prepared for the Final Exam. Remember, the final is to assess how well you have learned the material. To get a 2.0, you must score at least a 63% on the final and have at least a 73% overall average after the final. A 1.0 requires at least a 53% on the final and 63% overall. See **Documents>>Final/Proctor Information** for more details and for the arrangements you must make.

Homework, quizzes, worksheets and tests must be completed **on time** as outlined in the course schedule to receive full credit. I will usually give permission for late work, but it may incur a penalty—see **Documents >>Due Date Policies**. Lack of participation for more than two weeks will result in an immediate 0.0 and loss of access to the course.

***Your overall grade in this course is based upon the following point system:***

34 MyStatLab IRA's @ 2 points apiece	68 points
34 MyStatLab Section Assignments @ 4 points apiece	136 points
5 MyStatLab Quizzes @ 20 points apiece	100 points
5 MyStatLab Tests @ 100 points apiece	500 points
5 written Worksheets @ 25 points apiece	125 points
Proctored Final Exam	200 points
Extra Credit	15 points

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*Total:* 1144 points

**Your final percentage will be calculated using total points of 1129 since there are 15 extra credit points noted above.**

Grading Scale: Your final grade for this class will be a decimal grade. The following is a mathematical explanation of how your percentage grade for this class will be changed into a decimal grade for the class. Suppose  $x$  is your percentage grade.

- 1) If  $93 \leq x \leq 100$ , your grade is 4.0.
- 2) If  $0 \leq x \leq 62$ , your grade is 0.0.
- 3) If  $63 \leq x \leq 92$ , your grade is  $\frac{x-53}{10}$ .

Supplemental Help: There are many resources available in MyStatLab. **Be sure to use the videos, the step-by-step guidance on homework problems, any sample exams, the study guide, and especially the “show me how to do this” feature.** Read the Interactive Reading Assignments carefully.

- SFCC provides free online tutoring 24/7 at [www.etutoring.org](http://www.etutoring.org).
- SFCC also provides peer tutoring in Building 30.
- You are welcome to ask for assistance on specific problems or use the computers in the Math Learning Center (18-213). However, there may not be many tutors that will be able to help you with Statistics in the MLC. Remember you may not ask about quiz, test, or worksheet.
- You may also visit me; my office is located at SFCC in 18-212E during my office hours.

Student Withdrawal “W” Grades: Students may withdraw from class without instructor permission until **Monday, November 13<sup>th</sup>** (with W on transcript). Students who fail to withdraw themselves by the withdrawal deadline and quit attending class, remaining on the active class roster, may receive a grade of “0.0”.

Special Withdrawal after the College Withdrawal Deadline “Z” Grades: “Z” (special withdrawal) grades will be given after the official College withdrawal date provided the following:

***A Z grade will be awarded to a student provided they are receiving a 60% or better, have taken all exams, and provide a written request explaining why they’d like a Z grade. This arrangement will be accepted up to taking the final where the student would rather take a Z instead of the grade earned. You will not be allowed to take the Final Exam if you receive a Z grade.***

Compliance Statement: If any student has a health condition or disability that may require accommodations in order to effectively participate in this class, please do one of the following:

- 1) Contact me after class or
- 2) Contact Disability Support Services at SFCC in Building 17, room 201, or
- 3) Phone 509-533-4166 (DSS)

Information about a disability or health condition will be regarded as confidential.

Cheating: Mrs. Harras reserves the right to give a **0.0 for the course** for any form of **cheating**.

Caveats: Mrs. Harras reserves the right to make changes to the syllabus and will notify students of those changes immediately.