

# Syllabus for Introduction to Statistics – 4 credits

MATH 1103-99 (ISRS# 000546) – Fall 2010 *Last updated 072510*

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**Office Hours:** Announced first week. See schedule for online office hours in D2L/Chat.

**For MyStatsLab:**   **Course ID:** lange20535                   **IHCC zip code:** 55076

**Faculty website:** <http://faculty.inverhills.edu/nlange> (Select tab for MATH 1103-99): syllabus, calendar, homework, and first-week documents and instructions.

**D2L site:**                   **Content:** Course materials; **Dropbox** for assignments; **Discussion Board:** ask questions & give responses; **Chat** for online office hours; **Gradebook:** grades updated after each exam.

**Prerequisites:** C or higher in Math 0096 or Math 0099 or placement based on the IHCC assessment inventory. Some experience with computers particularly with the windows environment is strongly recommended.

**For Whom Intended:** This course is intended for students in majors that require an introductory statistics course or for students who need a college-level math course to satisfy goals 2 and/or 4 for the transfer curriculum.

## Required Materials (3):

**1. A scientific calculator** with manual statistical analysis capability such as TI36X is sufficient. However, most students like using a graphing calculator such as TI 83 or 84 Plus calculator. Keep your calculator manual for reference.

**2. Instructor Course Pack:** The instructor's coursepack for Math 1103-99 contains Minitab lesson notes, Minitab homework, and Minitab homework answer keys. These files are also posted in D2L/Content/Minitab. If you prefer a hard copy of these materials, please purchase the course pack via the IHCC bookstore. Near the beginning of the semester, course packs may be sold out. Then go to the bookstore register to prepay for a course pack. It will be printed for you within 24-48 hours.

**3. Text Package includes all of the following:** Textbook: *Elementary Statistics*, Triola, 11<sup>th</sup> edition, packaged with an access code to [MyStatsLab software](#), Minitab Student Manual/Workbook, a student solutions manual, and the student version of Minitab software release 14. When purchased at the IHCC bookstore, all of these materials (new) are bundled together with a price generally lower than when purchased individually, even used. The software must be new so that the authorization code has not been redeemed. Allow at least 2 weeks if you purchase required materials online through the IHCC bookstore. (See the next paragraph for an online text package alternative.)

**Optional Online Text Package:** In lieu of the hard cover text package, students may opt to purchase and download MyStatsLab directly to their computers. The software contains an eBook, links to text homework and review exercises. The other resources included in the text package are found via MyStatLab /Tools for Success: *Appendix B data sets* and *Student Solutions Manual*. Also, Tools for success/ Technology Manuals/ *Minitab Manual and Workbook* and Multimedia Library/ *publisher's lecture videos* (streamed or download to ipod) are available electronically. MyStatLab can be purchased and

downloaded at [www.coursecompass.com](http://www.coursecompass.com). Select the “Register” button for students and then the “Purchase online” link. 2) In addition to MyStatLab, you will also need to rent a single-user licensed copy of *Minitab version 15 (or 16)* from [www.e-academy.com](http://www.e-academy.com) in any of the forms offered: one semester, one year, or permanent license. Most students choose the one semester option. There is also a 30-day free trial, but you will need to upgrade to the one semester license when it is due to expire.

### **Registering and Enrolling in MyStatsLab software for Math 1103-99:**

To get registered and enrolled in MyStatLab software, you also need the college zip code **55076** and the course ID **lange20535**. You will find helpful resources for the program at [www.coursecompass.com](http://www.coursecompass.com). Select the “Get Started” button to see the “How Do I?” tour for students for how to get registered and enrolled in the software. Or you can select the “Student” link to access a printable explanation.

**Course Description:** We will cover all or parts of chapters 1-10, and 12 in the text. Topics include descriptive and graphical statistics, basic probability, probability distributions, sample distributions, confidence intervals, hypotheses testing, linear regression, and ANOVA. Minitab and calculators with statistics capability are used extensively throughout the course.

**Time Requirement:** Students should expect to put in *at least* 12 hours per week to watch the DVD (or streamed) lecture videos, read the text, do the textbook homework, and complete online homework and quizzes. Students must also watch the Minitab lesson lectures streamed on the Internet and should expect to put in approximately 1-1.5 additional hours per week of computer time to do Minitab homework and assignments to develop Minitab proficiency.

**Communication:** The IHCC official means of communication with all students is via the free Met-Net student e-mail accounts. Be sure to activate your Met-Net e-mail account and check it at least once per day throughout the semester. Occasionally I will use MyStatsLab e-mail system so be sure to update any e-mail address changes in the software. I request that all questions (unless of a personal nature) be posted in D2L on the “Discussion Board”. I invite students to post and answer questions there, and I will answer questions posted on D2L first each day so that everyone can benefit from these questions particularly during the first few weeks when nearly everyone has many of the same questions. Before posting a question, look to see if it has been answered already. Also, in D2L, check the FAQ link in “content” for information relevant to common questions. For personal questions, call me or send me an e-mail. For technical support on installation and download issues related to MyStatLab, call toll free 1-800-677-6337, 8AM-5PM CST or use the links to product support in the 2<sup>nd</sup> announcement within MSL. There is also a support link in the upper menu at [www.coursecompass.com](http://www.coursecompass.com).

**Office Hours:** Campus office hours in Library 239 and online office hours (in live chat) are posted on the course schedule (calendar) for the first 2 weeks of class. After that office hours will be set up as requested by students and will be posted in D2L with an e-mail notice to all students. To join a live chat office hour, log into D2L and select Chat → Join Office Hour → OK. Whatever you type in a chat gets recorded and stays there, so it can be read by others who log in later. Be careful about information that you reveal or what you say. Also, I have skype on my laptop which allows me to communicate directly via webcam with students who have downloaded the free software. Please contact me directly to request my skype contact information if you would like to try that out for a personal consultation.

**Grading: There are up to 1000 points:**

Get acquainted & set up activities	23 points (due by the end of the 1 <sup>st</sup> week, Aug 30)
Course Group Project & Presentation	100 points (proposal 10, project paper 40, group 10, 20 presentation, and 20 evaluations of other presentations)
Minitab Graded Assignments	up to 180 points (points vary based on content and length)
Online Homework:	87 points (29 @ up to 3 points each)
Online MyStatLab Quizzes:	110 points (11 @ 10 points each)
Exams:	300 points (3 @ 100 points each)
Final Comprehensive Exam:	200 points

Grades: 90-100% = A, 80-89% = B, 70-79%=C, 60-69%=D, Below 60% = F Students may choose the Pass/Fail grading option upon registering or within 5 business days according to college policy. You must have at least 70% to qualify for a grade of P for pass.

**Graded Assignments (See point values listed above.):** The first assignment is a “Get Acquainted” assignment due by the end of the first week which includes answering a contact info document, software installation with plug ins and players, as well as set up of all required technology accounts. There is a group semester statistics project and several smaller graded Minitab assignments (MTA) some of which may be done in groups. I will remind students of graded assignments that must be turned in via the D2L dropbox. However, if the D2L site has service issues, then you may e-mail requested files as attachments to [nlange@inverhills.edu](mailto:nlange@inverhills.edu) so that they are received on time.

**Homework:** After viewing the lecture videos (instructor lecture videos and/or publisher’s lecture videos), students should do the text homework first and use the solutions manual to review procedures and answers. Then do the online homework in *MyStatLab* which serves as an assessment (mini quiz) of how well the objectives have been learned. Each on-time homework assignment is worth 3 points for scores 90-100%, 2 points for 80-89%, and 1 point for 70-79%. If you use the button options in the online homework to find and correct your errors as you go, you will receive full credit on corrected exercises. Students have flexibility within each week when online homework is completed. However, they are encouraged to spread the work out over several days rather than to do a week’s work all at one time. ***Homework is considered on time if it is completed by the due date of the corresponding quiz.*** All homework must be completed even if it is after the quiz due date, but it has no point value if done after the quiz due date. To print online homework, click on the first exercise and use the print button on the right side of the screen choosing the option to print the entire set rather than the individual exercise. Printing homework takes a lot of paper so think before you print.

**Online Quizzes:** There are 11 online quizzes @ 10 points each if taken on time. I am flexible during the first 2 weeks to give students time to get software issues resolved. After that, ***quizzes taken within 2 days after the due date (counting weekends and holidays) are reduced by 20% and have no value after that*** unless there are extenuating circumstances judged so by the instructor. Each quiz may be taken up to two times keeping the higher of the two scores. ***Use the “review” button before exiting a quiz*** so you can mark errors and make notes on your quiz paper work to include the correct answer and the problem code (such as 3.2.17 indicating the section 3.2 exercise 17). Using that problem code, you can look at the student solution manual to see how that particular type of problem should have been done. Quizzes cannot be printed, so be sure to write down a summary of the problem statements so that the quiz questions have meaning for review prior to tests. Also, help buttons are not available in online quizzes. MyStatLab scores for online homework and quizzes are dated and uploaded when “submitted”. Scores

that are uploaded after midnight count for the next day even if they were started before midnight.

**Exams:** All exams are proctored in a secure setting including three 1-hour paper & pencil mid-term exams @ 100 points and one 2-hour comprehensive final written exam @ 200 points. Students must show a valid picture ID prior to taking an exam such as a driver's license or IHCC photo ID card.

***Students who do not take their exams on campus must have written permission in advance at the beginning of the term to arrange an approved proctor at an off-campus site.*** Generally, a missing exam is assigned a grade of 0. However, all students will have access to the exam key that will be posted for review on D2L usually within 1-2 weeks. Exam dates and times are shown on the course schedule (calendar). Use a planner to keep track of various due dates. Testing rooms will be communicated via IHCC student e-mail at least one week prior to the scheduled exam. If you know that you will miss an exam, contact me to make it up in advance of the due date with no reduction in points. If there are extenuating circumstances (with documentation), I will permit one late exam per student if arranged in advance and taken within two days of the due date. All late exams have point reductions unless extenuating circumstances occur as judged by the instructor.

**Make-up Work:** See each individual item above for details pertaining to late work. Contact the instructor immediately if extenuating circumstances will affect your course work and due dates.

**Miscellaneous:**

1. Cheating Policy: Cheating is covered by the Student Code of Conduct. In this course, students suspected of cheating will receive a zero on the graded work and will also result in the initiation of the Student Code of Conduct process.
2. Learning disabilities or special needs: Students with documented learning disabilities or special needs should make an appointment to discuss the situation with Tim Boyer (Disabled Student Services office 450-3628). Accommodations regarding a testing environment require a written form that must be given to me well in advance of the test date so that I have time to comply.
3. Withdrawal: Students must initiate requests for a withdrawal on an appropriate form by the posted deadline in the schedule of courses.
4. Incomplete: I will consider individual requests for an incomplete only in extenuating circumstances and in accordance with the college policy. If you have an extenuating circumstance that will prevent you from successfully completing the course on time, talk with me about it immediately. Typically a student must have at least a C and be very close to completion of the course for consideration of the time extension.

**To successfully complete this course, you must ...**

1. Watch the videos, read the text, take notes, do the Minitab labs, do all homework and assignments, and prepare well for tests. Ask questions via the discussion board, e-mail or phone and get help as soon as you do not understand concepts, procedures, and technology. Use my campus or online office hours and/or other resources listed in the syllabus.
2. Do the text homework before doing the online homework. Use the instructional buttons to correct all errors on the online homework. All homework scores should be at or close to 100% because correcting answers as you do the homework earns back full credit.
3. Keep on schedule. It is extremely difficult to learn new content when trying to catch up. I suggest that you use a planner to keep track of the various due dates for online homework, online quizzes, Minitab graded assignments, group project work, tests, etc.

**Learning Outcomes:** Upon successful completion of Math 1103, students will be able to ...

1. Demonstrate an understanding as well as apply basic principles of probability, probability distributions (including binomial and normal distributions), and the concept of expected value;
2. Determine appropriate confidence intervals involving the mean, proportion and/or standard deviation of one or two populations;
3. Perform appropriate hypothesis testing for the mean, proportion and/or standard deviation of one or two populations;
4. Determine if a linear correlation exists and find/use regression equations appropriately;
5. Determine when the use of non-parametric tests is appropriate;
6. Use graphs and numeric measures to determine the appropriate analysis for the data under consideration;
7. Demonstrate the appropriate use of the Analysis of Variance method for testing the equality of three or more population means;
8. Use the Minitab statistical software extensively to simulate, graph, sample and analyze data and calculate basic probabilities.

**Help Resources:**

**Instructor Office Hours:** I have on-campus and online office hours. Hours will be posted on <http://faculty.inverhills.edu/nlange> by the first week of the semester.

**Discussion Board:** Ask or answer general & content questions as if in a classroom.

**Email the Instructor:** [nlange@inverhills.edu](mailto:nlange@inverhills.edu) or call 651-450-3395

**IHCC Math Center:** The Math Center is a free drop-in tutoring center where students can work individually or in groups. It is located on the second floor of the Library Building and is open Monday-Thursday 9 a.m. to 6 p.m. and Friday 9 a.m. to 1 p.m. My office is located in the Math Center in L239. If you live close to campus, use the free drop-in Math Center to get assistance when needed or stop by my office during office hours. Also, you may call me to set up a time to meet individually with me.

**Tools for Success (in MyStatLab):** This page contains links to many online resources including the technology manuals (including the Minitab Manual), student solution manual, Appendix B data sets, graphing calculator tutorials, review cards, etc. Be sure to look there for helpful resources.

**Multimedia Library (in MyStatLab):** This page contains links to many audio and visual tools such as links to animations and streamed lecture videos as well as podcasts of the lectures for download.

**Pearson's Math Tutor Center (online):** The text publishers provide a free tutor center staffed with professional math educators who are available to answer student questions by phone, fax or e-mail. Click the "*Math Tutor Center*" link on the side tool bar in MyStatLab to get registered or call the toll-free phone number.

**Smart Thinking Tutor Service at IHCC:** The Smart Thinking online tutoring service can be found on the college website on the left side of the screen: *Online Inver Hills / Online Tutoring*.

**E-book (in MyStatLab):** The online version of the text is available to read or do text homework anywhere via the software. Individual pages are printable which may be helpful for those who like to copy entire exercises (rather than a summary) on paper. These can be printed, cut, and pasted to your homework notebook.