

# Math 250 Statistical Methods I

## Fall 2017

**Instructor:** Bo Kai

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**Office:** 350 Robert Scott Small Building

**Office Hours:** TR 2:00-3:00 pm or by appointment.

**Textbook:** *Introductory Statistics* (10<sup>th</sup> Edition), by Neil A. Weiss, Published by Pearson.

**Textbook Companion Website:** <http://www.pearsonhighered.com/weiss-stats>

**Prerequisite:**

Math 105 with a C- or better or Math 111 or Math 120 or permission of instructor.

**Course Webpage:** <http://kaib.people.cofc.edu/teaching/math250.htm>

To post the course calendar, homework assignments, statistical tables, etc.

**OAKS:** To post grades, lecture slides, solutions, study guides, etc.

**Calculator:** A TI-83 or TI-84 is **REQUIRED**. Please bring your **calculator** to every class.

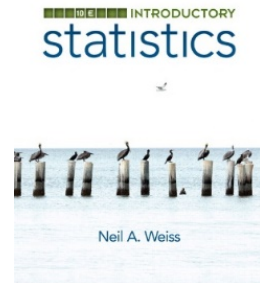
**Software:** A statistical software package, **Minitab**, will be used in this course to help organize, summarize and analyze data. *Minitab is available on most campus computers*. Personal copies can be obtained via 30-day trial (for free) or 6-month rental (for \$29.99). Please visit <http://www.onthehub.com/minitab/> for more details.

**Course Description:** Course topics will include descriptive and inferential statistics, probability concepts, discrete and continuous probability distributions, sampling distributions, confidence intervals, and hypothesis tests. Correlation and simple linear regression, analysis of variance and other topics will be introduced as time permits. A statistics software package, Minitab, will be used.

**Course Objectives:** This course is designed to develop quantitative skills along with critical and interpretive judgment. It focuses on both methodology and applications in statistics. It provides students for advanced courses in statistics or methodological tools in their research disciplines, by approaching real world problems and analyzing real data. Emphasis will be placed on the elements of sound statistical reasoning.

**Course Student Learning Outcomes:** By the end of the course, students will be able to

1. Summarize data by using methods of descriptive statistics.
2. Choose appropriate inferential procedures and apply them to make inferences about populations.
3. Understand the capabilities and limitations of statistical methods
4. Use appropriate technology, such as Minitab, to perform various statistical procedures
5. Interpret results and draw conclusions from statistical analysis.



## General Education Student Learning Outcomes:

1. Students will model phenomena in mathematical terms.
2. When given a question, students will apply models and establish conclusions.
3. Students demonstrate an understanding of the supporting theory apart from any particular application.

These outcomes will be assessed on the final exam.

**Grading Policy:** Your overall grade will be calculated according to the following formula:

Homework	12%	(2% for each one)
Quizzes (4)	18%	(6% for each one, the lowest one will be dropped)
Tests (2)	40%	(20% for each one)
Final Exam	30%	(Comprehensive)
Group Project	5%	<b>(Extra credit work, 5 bonus points)</b>

The lower cut-off points for your letter grades are:

F	D-	D	D+	C-	C	C+	B-	B	B+	A-	A
<60	60	63	67	70	73	77	80	83	87	90	93

## Course Policies:

1. **Extra Credit:** There are various extra credit opportunities in this course, such as the project, bonus assignments, class activities, etc. You will earn bonus points in those opportunities. A **bonus point** is defined as a point to be added to your overall grade. Extra credit opportunities are used to boost your grade, not to salvage your grade.
2. **Homework:** Homework will be assigned after each lecture but collected **bi-weekly**.
  - Homework will be checked for only completeness and quality.
  - Answers to odd-numbered problems are included in your textbook.
  - Detailed solutions will be posted online **after** each collection.
  - **It is your responsibility to check your HW answers against the solutions.**
3. **Homework Grading:**
  - **'S+':** means completed with high quality. If you get 4 or more (out of 6) 'S+' in the semester, you'll earn **a bonus point**.
  - **'S':** means satisfactory. You receive the full credit.
  - **'S-':** means unsatisfactory, due to poor quality / lack of necessary work / incomplete / late / etc. You only receive half of the credit.
  - **'M':** means missing. You receive zero.
4. **In general, no make-up quizzes or tests will be given.** However, in the rare case of serious illness, injury, or death in the family, or with the approval of the instructor, tests may be rescheduled, or the points for the missed quiz/test may be regained by a different weighting of other quizzes/tests.

5. **Attendance Policy:** Attendance is generally required and expected. In the event of absences:

- **Excused absence:** NO penalty if a student misses a class with a legitimate, documentable reason. The student needs to bring documentation to the Absence Memo Office located at 67 George Street to ask for an Absence Memo sent to me. Visit <http://studentaffairs.cofc.edu/about/services/absence.php> for more information.
- **Unexcused absence:** NO penalty if your overall letter grade is an 'A' or an 'A-'.  
**Otherwise:**
  - NO penalty for the **first 3** unexcused absences.
  - Starting from the **4<sup>th</sup>** unexcused absence, **5 points/absence** will be deducted from your overall grade.
  - A grade of "**WA**" (Withdrawal for Excessive Absences) will be assigned if you have **7 or more** unexcused absences.

6. **Honor Code and Academic Integrity:**

- Lying, cheating, plagiarism, and attempted cheating are violations of our Honor Code that, when identified, are investigated. Each incident will be examined to determine the degree of deception involved.
- Incidents, where the instructor determines the student's actions are related more to a misunderstanding, will be handled by the instructor. A written intervention designed to help prevent the student from repeating the error will be given to the student. The intervention, submitted by form and signed both by the instructor and the student, will be forwarded to the Dean of Students and placed in the student's file.
- Cases of suspected academic dishonesty will be reported directly by the instructor and/or others having knowledge of the incident to the Dean of Students. A student found responsible by the Honor Board for academic dishonesty will receive an XXF in the course, indicating failure of the course due to academic dishonesty. This grade will appear on the student's transcript for two years after which the student may petition for the XX to be expunged. The F is permanent. The student may also be placed on disciplinary probation, suspended (temporary removal) or expelled (permanent removal) from the College by the Honor Board.
- Students should be aware that unauthorized collaboration--working together without permission-- is a form of cheating. Unless the instructor specifies that students can work together on an assignment, quiz and/or test, no collaboration during the completion of the assignment is permitted. Other forms of cheating include possessing or using an unauthorized study aid (which could include accessing information via a cell phone or computer), copying from others' exams, fabricating data, and giving unauthorized assistance.
- Research conducted and/or papers written for other classes cannot be used in whole or in part for any assignment in this class without obtaining prior permission from the instructor.
- Students can find the complete Honor Code and all related processes in the Student Handbook at <http://studentaffairs.cofc.edu/honor-system/studenthandbook/index.php>

- 7. Students with Disabilities:** The College will make reasonable accommodations for persons with documented disabilities. Students should apply for services at the Center for Disability Services/SNAP, located on the first floor of the Lightsey Center, Suite 104. Students approved for accommodations are responsible for notifying the Instructor as soon as possible and for contacting the Instructor at least one week before any accommodation is needed.