2013

MATH 156-03-04 General Statistics

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Place and Time: Sec 03: TR 11:30 - 12:45; CLC 405
Sec 04: TR 1:00 - 2:15; CLC 405

Instructor: Holly Kaminski
Phone: 745-3779
Office Hours: Hinkle 122: TF 9:30 - 11:00, W 1:30 - 2:30, or by appointment
E-Mail: kaminskiha@xavier.edu
Math Tutoring Lab: Conaton Learning Commons 419; M-Th 10am-8pm; Fri 10am-2pm; Sun 2-8pm

Disclaimer
Please be aware that although this syllabus provides a general guideline / description of this course, it is still subject to change. Official changes concerning the items contained in this document will be announced in class or posted on blackboard.

Course Content: The discipline of statistics is the study of the collection and the analysis of random data. Statistical ideas and methods are especially useful in today's technically advancing world, in which data not only appears in a wide variety of contexts, but is also readily available. In this introductory course, students learn techniques to describe data (i.e., histograms, means, and standard deviation) and become proficient with classical tools for data analysis (e.g., confidence intervals, hypothesis testing, regression, and correlation).

This course fulfills one or more requirements of the Core Curriculum including but not limited to: Students will be critical thinkers (Goal #2) and Students will be creators of new knowledge and expression (Goal #3).

Text: Stats: Data and Models - 3rd Edition by DeVeaux, Velleman, and Bock

Calculator: We will make substantial use of the TI-83 or TI-84 graphing calculator. You are expected to bring your calculator to class every day. You are on your own if you choose to use a different model of calculator.
Exams

There will be three exams. See the schedule for these dates. Except for the final exam, these dates are tentative and subject to change. These exams will include a combination of multiple choice, short answer, and computational problems. Make-up exams are not given except under EXTREME extenuating circumstances. If you feel that you have such a circumstance you must notify the instructor in advance of the exam, either using the phone or email address noted. Verifiable documentation may also be required.

Quizzes / Worksheets:

There will be weekly graded activities. Quizzes will be completed individually; worksheets will be done in pairs. These will not normally be announced ahead of time, but you will be able to use your notes. The lowest score will be dropped. If you miss a class during one of these activities, this will be treated as your "dropped" score.

Grading:

The course requirements are weighed as follows:

Three Exams = 300 points (100 points each)
Quizzes = 100 points
Worksheets = 100 points

The semester grade will be calculated using the following scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>94-100</th>
<th>90-93</th>
<th>87-90</th>
<th>84-87</th>
<th>80-83</th>
<th>77-80</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>470+</td>
<td>450+</td>
<td>435+</td>
<td>420+</td>
<td>400+</td>
<td>385+</td>
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<tr>
<td>C</td>
<td>74-77</td>
<td>70-73</td>
<td>67-70</td>
<td>64-67</td>
<td>60-63</td>
<td>below 60</td>
</tr>
<tr>
<td></td>
<td>370+</td>
<td>350+</td>
<td>335+</td>
<td>320+</td>
<td>300+</td>
<td>385+</td>
</tr>
</tbody>
</table>

Note that extra credit work will not be assigned.

A Statement of Grading Standards for The Department of Mathematics & Computer Science is available at:

http://www.cs.xu.edu/~lewandow/gradingStandards.html

Group Work:

Working together will be emphasized in this class. Working in groups has the (sometimes uncomfortable) effect of "stretching" us - sometimes to articulate ourselves better, sometimes to realize the limits of our understanding, sometimes to understand how someone else may approach a problem very differently. In addition to working together in class, you are encouraged to find study partners or form study groups outside of class. Working in a group is beneficial, as long as you make sure that everyone is making contributions and that no one is left out. However, after discussing the homework, everybody should produce their own write-up, as this will be good preparation for the tests.

Attendance:

Necessary and expected!! In the class meetings you will be provided introduction and explanation of new topics/concepts/variations, you will see how the calculator is used, and you will see how problems are solved. Please practice good class-room etiquette: come to class on time, TURN OFF all cell phones as they interfere in a negative way with class interactions, refrain from disruptive behavior, and be respectful of your fellow classmates. If you are frequently excessively late for class it will have a negative impact on your course grade.
Honor Statement: You are expected to conduct yourself with academic honesty and personal integrity in this course. Students will be required to sign the following Honor pledge on all exams: "As a student at Xavier University, I have neither given nor received unauthorized aid on this exam (Student signature)"

During exams, absolutely no collaboration with other classmates is permitted. Academic dishonesty includes but is not limited to the unauthorized use of notes, cheat sheets, cell phones, and the like. Serious violations of the exam policy will result in a zero for that test/exam and referral to the Dean.

Blackboard: All course information will be on Blackboard. You are required to check Blackboard daily for course announcements, updates, corrections, and new assignments. Any modifications to the schedule, homework assignments, or otherwise will be discussed in class and can be found here.

Homework: There will be homework assigned for each section. The purpose of these exercises is to get you familiar with the material of the section and the type(s) of questions and ideas that I expect you to understand. It will not be collected, BUT, you are expected to do it. Sitting in class and understanding the concepts is not sufficient to pass the class. You must practice the ideas by doing the homework problems. Questions on exams will be comparable to these problems. There is a direct correlation between students who diligently do the homework and come to office hours and those students who do very well in the course.

We will dedicate some class time to homework questions, but this time will be limited by what we must cover each class. Thus, to get the most time possible for homework and review questions, come and see me in my office or utilize the tutoring lab.

Hints for Doing Well in this Course:
* Come to class! Pay attention! Participate! Take notes!
* Read your book! Review your class notes!
* Try the problems! (even if you think you completely understand, often homework challenges you and makes you realize that you may not fully comprehend the material)
* Practice problems on your own, without a partner and without notes, to simulate a test environment. If the first time you try problems on your own is on a test, you are not going to be prepared.
* If you have a question - ask!
* Smile! Enjoy! Don't panic!
* Most importantly: If you don't understand something or feel yourself falling behind, don't wait - seek help!!!! You can visit me during office hours (or set up an appointment) or visit the math lab. You are ALWAYS welcome! That's why I'm here! 😊
Consider this post from a mathematics professor at a university in the Boston area. An apology for mathematics addressed to a basketball player:

Math is like dribbling with your left hand
I recently had the following conversation with a player on the women’s basketball team at the college where I teach.

• Student athlete: 'What do you do at the college?''
• Math professor: "I am a math professor."
• Student athlete: "I hate math." or "I can’t do math" or "Math is hard." (I don’t recall her exact statement.)
• Math Professor: "Can you dribble with your left hand?"
• Student athlete: "Yes, of course I can."
• Math Professor: "That’s like math."

The student-athlete immediately understood my meaning.

... For many people, I think the following can be said of both skills [success with mathematics and success dribbling left-handed]:

• It may not come naturally to you.
• It may be hard to do at first.
• You will improve with practice and proper teaching.
• It is important to learn how to do it.
• If you don’t learn how to do it, you are an incomplete player/professional/person.
• If you don’t learn how to do it, you have a major weakness that others can exploit.
• If you don’t learn how to do it, your options are limited in many situations.
• If you don’t learn how to do it, you are not as valuable to your team/employer/self.
• If you don’t learn how to do it, you will encounter situations that you cannot deal with.

Moral of the story: You may never become an expert at it, but you need to be capable of doing it with a certain skill level in order to compete.
## MATH156-03, -04

**GENERAL STATISTICS**  
Tentative Spring 2013 Schedule

<table>
<thead>
<tr>
<th>Week of</th>
<th>Tuesday</th>
<th>Thursday</th>
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</thead>
<tbody>
<tr>
<td>1/8, 1/10</td>
<td>Intro, Ch 2</td>
<td>Ch 3 - 4</td>
</tr>
<tr>
<td>1/15, 1/17</td>
<td>Ch 4 - 5</td>
<td>Ch 5 - 6</td>
</tr>
<tr>
<td>1/22, 1/24</td>
<td>Ch 6 - 7</td>
<td>Ch 7 - 8</td>
</tr>
<tr>
<td>1/29, 1/31</td>
<td>Ch 8</td>
<td>Ch 11 - 12</td>
</tr>
<tr>
<td>2/5, 2/7</td>
<td>Ch 12</td>
<td><strong>Test #1</strong>: Ch 2-8, 11, 12</td>
</tr>
<tr>
<td>2/12, 2/14</td>
<td>Ch 14</td>
<td>Ch 14 - 15</td>
</tr>
<tr>
<td>2/19, 2/21</td>
<td>Ch 15</td>
<td>Ch 15 - 16</td>
</tr>
<tr>
<td>2/25-3/1</td>
<td><strong>No Class - Spring Break</strong></td>
<td></td>
</tr>
<tr>
<td>3/5, 3/7</td>
<td>Ch 16</td>
<td>Ch 18</td>
</tr>
<tr>
<td>3/12, 3/14</td>
<td>Ch 18</td>
<td>Ch 19</td>
</tr>
<tr>
<td>3/19, 3/21</td>
<td>Ch 19</td>
<td><strong>Test #2</strong>: Ch 14-16, 18, 19</td>
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<tr>
<td>3/26, 3/28</td>
<td>Ch 20</td>
<td><strong>No Class - Easter Break</strong></td>
</tr>
<tr>
<td>4/2, 4/4</td>
<td>Ch 20-21</td>
<td>Ch 22</td>
</tr>
<tr>
<td>4/9, 4/11</td>
<td>Ch 22 - 23</td>
<td>Ch 23</td>
</tr>
<tr>
<td>4/16, 4/18</td>
<td>Ch 24</td>
<td>Ch 24 - 25</td>
</tr>
<tr>
<td>4/23, 4/25</td>
<td>Ch 25</td>
<td>Ch 26</td>
</tr>
</tbody>
</table>

**Final Exam (Chapters 20-26):**  
Sec 03: Tuesday, April 30th 10:30 - 12:20  
Sec 04: Thursday, May 2nd 10:30 - 12:20