

### **Course Description**

Introduction to Statistics is a one semester course designed for the college bound student who has demonstrated success in Algebra 2 and wishes to continue to explore a large range of topics with an emphasis on “real world” applications such as games of chance, random population, and actuarial science.

Technology plays an important role in statistics and probability by making it possible to generate plots, regression functions, and correlation coefficients, and to simulate many possible outcomes in a short amount of time. Students will regularly apply the tools of technology including the graphing calculator and computer to solve problems. They will be challenged through critical thinking exercises and participate in various group and individual activities that will enhance their mathematical reasoning ability and communication skills. Students are expected to use the information and technology in various ways in real world applications.

### **Materials Needed**

- **Text:** Understanding Basic Statistics – Charles Henry Brase
- 1 A4 Binder
- Scientific or Graphing Calculator (required)
- Laptop (when necessary)
  - Note: must have Microsoft Word and Microsoft Excel
- PENCILS and eraser

### **Classroom Expectations**

- Students are expected to come to class prepared and on time
  - If you are not in your desk when the bell “rings”, you are late!
- No food or drink (except water) are allowed at any time
- **All** classroom conversations (spoken, written, etc.) will be conducted in English
- Translators are not allowed in class
- Everyone is expected to treat everyone/everything with respect.

### **Grading Policy**

- **NO** late work is accepted.
- Students who are absent will have 1 day per absence to turn in work. Students who miss more than 2 consecutive days must meet with the teacher outside of class.
- Projects will be counted as a test grade, quiz grade, or both.
- The final exam (midterm at the end of 1<sup>st</sup> Semester; final exam at the end of 2<sup>nd</sup> semester) is worth 10% of your final grade for the semester

<b>Grade Breakdown</b>	
Participation	10%
Homework	10%
Test	30%
Writing	25%
Activities/Labs	25%

**Participation Grade:**

To track participation grades this year we will be using a clasdojo.com. I will give you an access code and you will have to create a student account. Through this website you will be able to track your positive participation points as well as your negative participation points. Your participation grade will be your percent at the end of the term.

<b>Positive Examples</b>
Asking Questions
Helping classmates during work time
Staying on task
Volunteering for example problems

<b>Negative Examples</b>
Leaving for the restroom
Disrespect
Homework not started/complete
Distracting other students
Sleeping/head on desk
Speaking Chinese
Tardy/Unprepared

**Vocabulary:**

An important part of this year’s class will be to improve math vocabulary. To help students with their math vocabulary, they will be filling out/completing vocabulary charts. Students will also be given vocabulary quizzes/tests that will test their reading, writing, speaking, and listening comprehension.

**Homework:**

Students will be assigned homework daily. Homework will be “graded” on a scale of 0 – 2.

2 points – full effort/attempt; assignment is roughly 75% or more complete

1 point – half effort/attempt; assignment is roughly 50% complete

0 points – no effort/attempt; assignment is less than 50% complete

**NO** late homework will be accepted.

**Test:**

Tests will be given each chapter. You will be given at least a 3 day notice. All tests will be scored out of 100 points.

**NOTE:** You will be given a zero on a quiz/test if:

1. You are caught cheating (this includes copying answers or allowing others to copy from you).
2. You are caught talking, passing notes or otherwise communicating during a quiz/test, even if you have already finished.

**Writing:**

Each chapter will have a writing component. More information will be provided with the 1<sup>st</sup> chapter.

**Activities/Labs:**

Each chapter will have an activity and/or lab associated with it. Labs will include a lab report. More information will be provided with your 1<sup>st</sup> lab.

## Rewards/Extra Credit:

**Participation Points:** This year we will have a “classroom store” available for you to purchase useful class items based on your positive clasdojo points earned.

- ✓ 15 points – 1 Homework Pass
  - allows you a 1 day extension on a homework assignment
- ✓ 40 points – 1 Test Pass
  - Add 10% to your lowest test grade (only those test grades below 65% are eligible)

You are allowed to bank points for the duration of the term. 10% of the points not used at the end of the term will be turned into extra credit towards your participation grade.

**Tests:** Golden tickets will be awarded based on the following criteria

- ✓ 100% or better – 3 golden tickets
- ✓ 95% or better – 2 golden tickets
- ✓ 90% or better – 1 golden ticket
- ✓ Class average of 85% or better – each person in class WHO PASSES THE TEST will get 1 golden ticket

## “Office Hours”:

I am available for help every morning from about 7:15 am until classes start at 8 am. There are some nights I will be around for study hall; however, it will probably only be about once every two weeks.

## More Specific Classroom Rules and Behavior:

- All ICA rules apply inside the classroom
- The following are some specific rules that are often a problem. This is not a complete list of classroom rules but an outline of a few specific expectations which tend to create the largest problems in class.
  - Do not speak while other are speaking
  - Do not put your head on your desk at any time
  - All students should be in their appropriate school uniform. Any students violating this policy will be sent directly to the dean of students.
  - Students should use the restroom before class! I understand emergencies happen and will be dealt with individually.
  - **Cell Phones & MP3 Players** – school rules prohibit cell phones and electronic devices. The first time the device comes out (without me telling you to take it out) I will put it in a drawer in my desk for the remainder of the school day. If a student refuses and it becomes a larger issue they will be sent to the dean of students resulting in confiscation of the phone as outlined in the school’s rules.
  - **Speaking Chinese** – Simple, just don’t. You are here to learn and improve your English skills, so use English. Excessive Chinese (or any other non-English language) will hurt your grade (in terms of your participation). This is your warning!

**Cheating and Plagiarism:**

Students who are caught cheating on any assignment, quiz, or test will receive a zero for that assignment, quiz, or test. If the students turn in a written assignment that is word for word the same as another student, copying is assumed. While answers are often similar rarely do you say something with the exact words that someone else does.

**Course Topics:**

- What is Statistics?
- Organizing Data
- Averages and Variation
- Elementary Probability Theory
- The Binomial Probability Distribution
- Normal Distributions
- Estimation
- Hypothesis Testing