**Required Materials:**

* 2 three-ring binders (one for notes, one for portfolio)
* loose leaf paper or notebook paper
* graphing paper
* graphing calculator
* writing utensils

**Textbook Resources:**

* Yates, D., Moore, D., Starnes, D. “The Practice of Statistics, 2nd Edition.” *WH Freeman and Company*, 2002.

**Technology:**

* It is strongly recommended that all students have the equivalent of a TI-83, TI-83+, or TI-84 graphing calculator for use in class, at home, and on the AP Exam.
* Students will use their graphing calculator extensively throughout the course. Most assignments, numerous in class activities, and tests will require the use of a graphing calculator. Students that do not have access to a graphing calculator will have great difficulty with the class.
* The TI calculators are recommended since in class examples and instruction will be given using the TI-84 (very similar to the TI 83). I cannot ensure that I will be able to instruct the calculator commands of a different style of graphing calculator. Please also note that the key strokes on the TI 86 & 89 are completely different than the TI 83/84.
* Students will occasionally go to the computer lab to utilize statistics software, MS Excel, as well as some Internet applets. If you have any concerns regarding your child’s computer and internet usage, please do not hesitate to contact me.

**Course Description:** Curriculum for the course follows the AP Statistics curriculum set by the College Board and is designed to prepare students for the AP Statistics exam in May. This syllabus is adapted from the course description given by the College Board. The full course description can be downloaded from [www.Collegeboard.com](http://www.Collegeboard.com)/stats. The purpose of the AP course in statistics is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. This course draws connections between all aspects of the statistical process, including design, analysis, and conclusions. Additionally, by using the vocabulary of statistics, students will learn how to communicate statistical methods, results, and interpretations. Students will learn how to use graphing calculators and read computer output in an effort to enhance the development of statistical understanding.

**Performance Standards:** During this course, students will be exposed to four broad conceptual themes and will be expected to demonstrate proficiency in:

* Exploring Data: Describing patterns and departures from patterns
* Sampling and Experimentation Planning and conducting a study
* Anticipating Patterns: Exploring random phenomena using probability and simulation
* Statistical Inference: Estimating population parameters and testing hypotheses

To help in mastering these standards and studying for the AP exam, all class notes, assignments, exams, and quizzes should be kept in a neatly organized binder. Your notebook/binder for class should be organized into clearly labeled sections: Notes, Homework, Exams/Quizzes, Labs, AP prep materials.

**Classroom Standards:** Students are to follow all PCHS rules & standards. Students are to come to class every day prepared with all materials, assignments, and an open mind to learning. Disrespect and purposeful distraction will not be tolerated, and may be met with varying degree of discipline on a case-by-case basis.

**Academic Dishonesty:** Cheating of any kind will not be tolerated. All involved parties will earn zeros on the assignment or assessment and a disciplinary referral will be sent to the main office. Examples of cheating include, but are not limited to: representing the work of others as your own (copying, allowing someone to copy), looking at another student’s paper during a test or quiz, using prohibited materials (notes, etc.) on quizzes or tests, sharing calculators during tests or quizzes, and discussing tests or quizzes with other students who have not taken it yet.

**Grading:**

 **Grading Scale Grade Weights**

A 90 – 100 50% Engagement

 B 80 – 89 (homework, labs, portfolio, classwork)

 C 70 – 79 35% Tests

 D 60 – 69 15% Quizzes

 F <60

**Labs:** Students will perform at least 1 lab per unit, either individually or in groups depending on the nature of the assignment. Statistics labs will involve students conducting their own surveys and experiments, then applying the appropriate statistical measurement they have learned and interpreting the results. Lab assignments are designed to give a hands-on approach to abstract statistical concepts that will aid students in understanding content in the context of AP-level rigor. All labs, once graded, should be kept in the portfolio. \*\*If students complete a lab with a partner or group, please be prepared to make copies of the group’s work so that you have your own copy\*\*

**Project Portfolio:** Each student will maintain an individual portfolio that will hold their completed assignments throughout the year. Sections of the portfolio should be organized by unit, and will be taken up and graded per quarter. Included in the portfolio will be individual work for quarter projects, labs, and presentations (if applicable). The portfolio is designed to help students stay organized and be able to reflect on their work in preparation for the AP exam.

**Makeup Work/Absences:** If you are absent for any reason, it is your responsibility to obtain all missed materials, notes, homework solutions, assignments, etc. All assignments will be posted on the class website; please refer to it for assignments. It is also a good idea to choose someone in class that you can call or email if you are absent. If you miss a test or quiz, you must take it immediately upon your return, and you will take an alternative version. All other assignments that were assigned before you were absent will be due within 3 days, no exceptions. I will **not** accept late homework, labs, or projects.

**Tutoring:** Tutoring is available on Wednesday mornings from 8:30am – 9:25am in my room. Students needing additional tutoring hours are more than welcome to schedule additional times with me.

**The AP Exam:** It is assumed that all students are in this class with the intention of taking the AP exam in May. If you are taking this course with the hopes of earning college credit, please note that not all colleges have the same policy for accepting AP credit and should be contacted to know their official score acceptance (i.e. some colleges accept a level 3 for credit, others require you to obtain a 4 or 5). If, for any reason, you decide not to take the AP exam, you are still required to complete all work and participate in all review activities in class with respect to the AP exam.

**Course Outline By Week: (subject to change)**

|  |  |
| --- | --- |
| **Fall Semester** |  |
| Week 1  | Class Expectations and Introduction to Statistics |
| Weeks 2-3 | Exploring data |
| Weeks 4-5 | Standard Deviation and Variance |
| Week 6 | Scatterplots and Correlation |
| Weeks 7-9 | Bivariate Data |
| Weeks 10-12 | Relations in Categorical Data |
| Weeks 13-14 | Experimental Design, Sampling, and Randomness |
| Week 15 | Probability |
| Weeks 16-17 | Random Variables and Sampling Distributions |
| Week 18 | Simulating Distributions  |
| **Spring Semester** |  |
| Weeks 1-3 | Simulating Distributions (cont’d) |
| Weeks 4-6 | Confidence Intervals |
| Weeks 7-8 | Inference for a Single Proportion |
| Weeks 9-11 | The distribution, standard error, one-sample & matched-pairs t tests  |
| Weeks 12-13 | Contingence and Two-Way Tables |
| Weeks 14-15 | Inference for Regression |
| Week 16 | Review and Prep for AP Exam |
| Weeks 17-18 | Analysis of Variance (ANOVA), finalize portfolios  |
| Week 19 | Final Exam  |

**Please sign and return:**

I have read and discussed with my child \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the contents of this syllabus, and we declare to uphold the policies and procedures outlined in this document to the best of our abilities.

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 Parent/Guardian Signature Student Signature

Parent/Guardian Name (printed): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Parent/Guardian phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Parent/Guardian email: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

I prefer to be contacted by (please circle one): phone email