



Dominican International School

台北市私立道明外僑學校

No. 76, Dazhi Street, Taipei (104042), Taiwan, R.O.C.

10464 臺北市中山區大直街 76 號



AP STATISTICS SYLLABUS

School Year	2026-2027
Subject	AP STATISTICS
Grade Level	Grade 11 & 12
Teacher	Mr. Edward Solis
Email	esolis@dishs.tp.edu.tw

COURSE DESCRIPTION:

Teaching Statistics provide students with a great simplicity in instruction and activities that is geared to a balance learning in school and at home. Students are gathered into small groups to develop their communication and mathematical skills. Essential classroom discussion related to the topics is also enhanced.

Teaching materials for the course come from textbooks, classroom lectures, newspapers, journals, medical newsletters, videos, and the internet. At the start of the school year, students receive a list of formulas and tables from the course description book. These handouts are used throughout the year for homework and tests. Students will have access to the computer lab for statistics computer tasks. Classroom is equipped with computer and smart board to assist teacher and student learning.

PROJECT:

Projects form a major part of the course. Student need to complete three to five projects each semester. Some of these projects are completed during class time, whereas others are completed outside of class. These projects require students to design surveys and experiments, gather data, analyze the data numerically and graphically, and apply inferential statistics to draw conclusions for a population. Students write formal reports on their projects using statistical language.



AP Statistics Survey Project

Introduction

AP Statistics has introduced you to the methods and procedures that allow us to explore four themes: Exploring Data, Sampling and Experimentation, Anticipating Patterns, and Statistical Inference. This project is designed to allow you to demonstrate your understanding of the connections between these themes as you carry out a statistical study. Your task is to identify a research question that interests you, design a study to collect data on that question, analyze the data and answer question using an appropriate form on inference.

Objectives

The purpose of this project is to allow you to communicate your understanding of the connections between the four themes of Statistics.

To present a final report that clearly indicates your understanding of data collection, analysis, and inference.

Project Outline

1. Identify a research question

Phase 1 Team members brainstorm possible survey topics on issues of school interest

Phase 2 Each team submits a typed proposal describing:

- Topic/question of interest
- Background motivation for selecting this topic/question
- Questions to be included in the survey
- Methodology
 - The type of sampling procedure do you intend to use – stratified, cluster, SRS or systematic
 - Precise description of your randomization, including labeling
 - When, where, and how you will administer the survey

2. Collect Data – Observational Study or Experiment

Phase 3 Select your sample and administer your survey

3. Analyze Data – Graphically and Numerically

Phase 4 Organize, summarize, and analyze your data

4. Perform Inference – Answer Research Question

Phase 5 Prepare a written report that documents your survey

5. Present Findings

Phase 6 Class Presentation – a ten minute opportunity to share the critical aspects of the survey project with your classmates. Make it interesting!



Project Expectations

1. Identify a research question
 - Identify a question that is interesting, appropriate, and worthy of investigation.
 - Your question must lend itself to data that can be analyzed using the methods learned in class.
 - You are expected to get your question approved prior to collecting data.
 - Form appropriate hypotheses to guide your investigation.
2. Collect Data – Observational Study or Experiment
 6. Data can come from three sources: A well-designed and carried out survey, observational study, or experiment.
 7. Your data collection procedure should accurately reflect the question being researched.
 8. A full, detailed description of the collection procedure should be included in your final report. Thoroughly describe the procedure in terms of the methodology learned.
 9. Organize raw data in a spreadsheet/document and include in an appendix in your final report.
3. Analyze Data – Graphically and Numerically
 - Analyze raw data using appropriate graphical and numerical procedures.
 - Describe Shape, Outliers, Center, and Spread of datasets in the context of your research question.
 - Include appropriate graphical displays and numeric summaries/descriptions in your final report.
 - Interpret the Exploratory Data Analysis in the context of your research question
4. Perform Inference – Answer Research Question
 - Form appropriate hypotheses to answer your research question.
 - Check appropriate conditions for your test of significance.
 - Show all applicable work: Sampling Distribution, Test Statistic Calculation, p-value, etc.
 - Answer your research question based on your inferential calculations.
5. Present Findings
 - You are expected to write up your findings in a final report. This report should follow a standard academic format and should include a section for each task noted above.



PRIMARY TEXTBOOKS AND OTHER RESOURCES:

1. AP Classroom (www.Collegeboard.org)
2. AP College Board Exam FRQs and MCQs
3. **David Bock, Floyd Bullard, Paul Velleman, and Richard De Veaux, *Stats: Modeling The World*, 6th Edition, AP Edition, Pearson. 2023.**
4. **David Bock, Floyd Bullard, Paul Velleman, and Richard De Veaux, *Test Prep Serices for AP Statistics*. 6th Edition, AP Edition, Pearson. 2023.**

GRADING SYSTEM/ASSESSMENT:

Grading Criteria:

The quarterly grade will be awarded for all student work based on the following criteria:

- ✓ **Class participation and Seatwork** - 3/10 of quarterly grade
- ✓ **Major Projects, Quizzes and Tests**- 3/10 of quarterly grade
- ✓ **Quarterly Exams**- 3/10 of quarterly grade
- ✓ **Deportment** - 1/10 of quarterly grade

Student Materials Required:

- The students will need to bring notebook to write their works and lecture
- The students must bring the prescribed calculator and a measuring device like ruler for making graphs

Classroom Expectations:

1. Be on time to class; be seated **before** the bell rings.
2. Wear your uniform neatly.
3. Use English at all times.
4. Come prepared with books, assignments, and supplies and without gum, food or drink (a sealable water bottle is okay).
5. Be respectful of others (especially when speaking), and of school property.
6. Do your best and participate.
7. Ask permission before leaving the class; take hall pass.
8. Wait for the bell to ring before you leave class.

Homeworm/Seatwork rules

1. The students may NOT copy from classmates
2. The students are allowed to help each other verbally.
3. The students are NOT allowed to do the work, partially or entirely, for other students.



Discipline:

1. Verbal warning, second reminder (if needed)
2. Write-Up and then referral to the Discipline Office.
3. Parent-Teacher conference.

Sample Activity

Activity

1. Dean's office at Hendrix College gave the following information about numbers of majors in different academic areas: Humanities, 372; Natural Sciences, 415; Social Science, 511; Business Administration, 619; Philosophy, 196. Make a Pareto chart representing this information.
2. Professor Hill in the Music Department kept a list of the number of students visiting his office each week for two semesters (30weeks). The results were

15	23	17	13	3	9	7	6	8	11
16	32	27	4	20	3	28	5	6	11
20	12	8	10	25	10	8	15	11	9

- (a) Make a frequency table with five classes, showing class boundaries, class midpoints, frequencies, relative frequencies, and cumulative frequencies.
 - (b) Draw a frequency histogram from the information in part (a)
 - (c) Draw a relative-frequency histogram from the information in part (a)
 - (d) Draw an ogive from the information in part (a)
3. Jim is a taxi driver who keeps a record of his meter readings. The results for the past 20 meter readings (rounded to the nearest dollar) are given below.

15	7	9	21	19	17	8	35	22	33
46	5	24	37	51	49	57	42	12	16

Make a stem-and leaf display of the data.



Sample use of Calculator

33

1-Var Stats

$x = 85$
 $\Sigma x = 1190$
 $\Sigma x^2 = 101956$
 $Sx = 7.874007874$
 $\sigma x = 7.587583843$
 $n = 14$



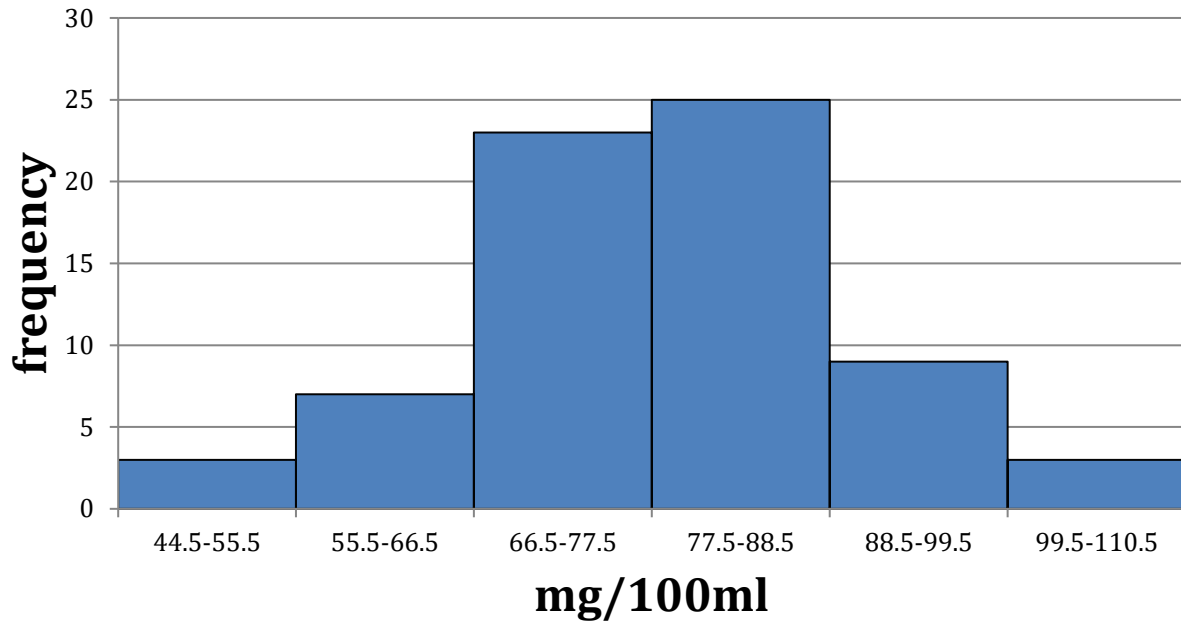
Sample use of Computer Software (MS Excel)

Class #	Class		Tally
	Lower limit	Upper limit	
1	45	55	
2	56	66	
3	67	77	
4	78	88	
5	89	99	
6	100	110	

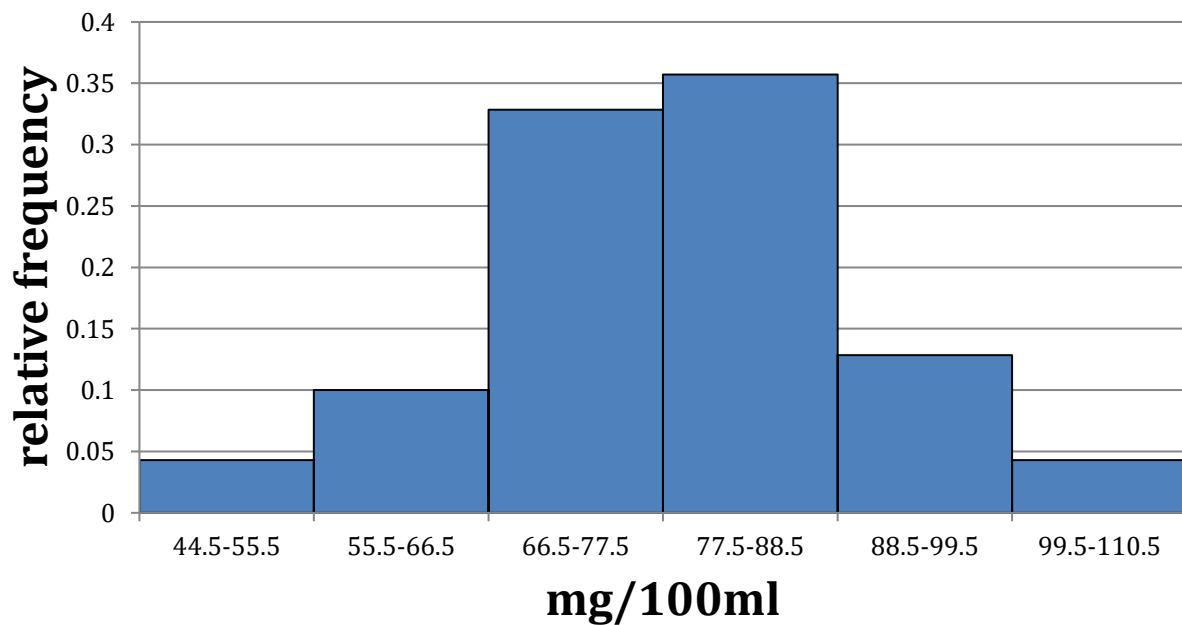
Class #	Class		Frequency	Relative frequency	Class Boundaries		Cumulative Frequency
	Lower limit	Upper limit	f	f/n	Lower	Upper	
1	45	55	3	$\frac{3}{70} = 0.0429$	44.5	55.5	3
2	56	66	7	$\frac{7}{70} = 0.1000$	55.5	66.5	10
3	67	77	23	$\frac{23}{70} = 0.3286$	66.5	77.5	33
4	78	88	25	$\frac{25}{70} = 0.3571$	77.5	88.5	58
5	89	99	9	$\frac{9}{70} = 0.1286$	88.5	99.5	67
6	100	110	3	$\frac{3}{70} = 0.0429$	99.5	110.5	70
			N=70	$\frac{70}{70} = 100.00$			



Glucose Blood Level - Histogram



Glucose Blood Level - Histogram





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WEEKLY SCHEDULE

First Quarter Tentative Course Content

Week & Date	Topics / Projects / Assessments
Week 1 Aug 10 - 14	Monday Class Preparation ~ Student Holiday Tuesday Morning Assembly Friday Opening Mass & Assumption of Our Lady 8:00
Week 2 Aug 17 - 21	1.2 Displaying and Describing Categorical Data
Week 3 Aug 24 - 28	1.3 Displaying and Summarizing Quantitative Data
Week 4 Aug 31 - Sep 4	1.4 Understanding and Comparing Distributions
Week 5 Sep 7 - 11	1.5 The Standard Deviation as a Ruler and the Normal Model
Week 6 Sep 14 - 18	2.1 Scatterplots, Association, and Correlation
Week 7 Sep 21 - 25	T-W-Th Pre-Exam Days Friday Moon Festival ~ Public Holiday 2.2 Linear Regression
Week 8 Sep 28 - Oct 2	Monday Confucius' Birthday ~ Public Holiday Thursday Major Exams Day 1 Friday Major Exams Day 2 First Quarter Exams
Week 9 Oct 5 - 9	Monday Record Day ~ Student Holiday T-W-Th Teachers Conference ~ Student Holiday Friday Double 10 Day ~ Public Holiday



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Second Quarter Tentative Course Content

Week & Date	Topics / Projects / Assessments
Week 1 (10) Oct 12 - 16	2.3 Regression Wisdom
Week 2 (11) Oct 19 - 23	2.4 Re-expressing Data: Get It Straight!
Week 3 (12) Oct 26 - 30	Monday Retrocession Day ~ Public Holiday 3.1 Understanding Randomness
Week 4 (13) Nov 2 - 6	3.2 Sample Surveys
Week 5 (14) Nov 9 - 13	3.3 Experiments and Observational Studies
Week 6 (15) Nov 16 - 20	4.1 From Randomness to Probability
Week 7 (16) Nov 23 - 27	T-W-Th Pre-Exam Days Friday Grade 12 Exams 4.2 Probability Rules
Week 8 (17) Nov 30 - Dec 4	Monday Grade 12 Exams Second Quarter Exams
Week 9 (18) Dec 7 - Dec 11	Monday TBD Tuesday Foundation Day Mass 9:00, Cutting of the Cake Ceremony, Christmas Fair, (Whole day) Wednesday TBD Thursday Major Final Exams half day Friday Major Final Exams half day 4.3 Random Variables
<i>Dec 14 to Jan 1 Christmas Break</i>	



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Third Quarter Tentative Course Content

Week & Date	Topics / Projects / Assessments
Week 1 (19) Jan 4 - Jan 8	Monday Record Day ~ Student Holiday Friday New Year Mass at 8:00 4.4 Probability Models
Week 2 (20) Jan 11 - Jan 15	5.1 Sampling Distribution Models
Week 3 (21) Jan 18 - Jan 22	5.2 Confidence Intervals for Proportions
Week 4 (22) Jan 25 - Jan 29	5.3 Testing Hypothesis About proportions
Week 5 (23) Feb 1 - Feb 5	Thursday Little New Year's Eve ~ Public Holiday Friday Lunar New Year ~ Public Holiday 5.4 More About Tests and Intervals
<i>February 8 to 12 Chinese New Year Holiday</i>	
Week 6 (24) Feb 15 - Feb 19	5.5 Comparing Two Proportions
Week 7 (25) Feb 22 - Feb 26	22-26 IOWA Assessments 6.1 Inferences About Means
Week 8 (26) Mar 1 - Mar 5	Monday Memorial Day ~ Public Holiday T-W-Th Pre-Exam Days 6.2 Comparing Means
Week 9 (27) Mar 8 - Mar 12	6.3 Paired Samples and Blocks
Week 10 (28) Mar 15 - Mar 19	7.1 Comparing Counts
Week 11 (29) Mar 22 - Mar 26	Tuesday Major Final Exams half day Wednesday Major Final Exams half day Thurs - Fri Easter Break (Spring Break) ~ Public Holiday 7.2 Inferences for Regression
<i>March 25 to April 2 Easter & Spring Break</i>	



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Fourth Quarter Tentative Course Content

Week & Date	Topics / Projects / Assessments
Week 1 (30) Apr 5 - Apr 9	Monday Tomb Sweeping Day ~ Public Holiday Tuesday Children's Day ~ Public Holiday AP Stats Review
Week 2 (31) Apr 12 - Apr 16	AP Stats Review
Week 3 (32) Apr 19 - Apr 23	19 - 23 AP Mock Exams
Week 4 (33) Apr 26 - Apr 30	T-W-Th Pre-Exam Days Friday Labor Day ~ Public Holiday AP Stats Review
Week 5 (34) May 3 - May 7	3 - 7 Final Exams (K, Gr. 5, 8, & 12 Only) 3 - 14 AP Exams
Week 6 (35) May 10 - May 14	3 - 14 AP Exams Wednesday Major Final Exams Undergraduates half day Thursday Major Final Exams Undergraduates half day Friday Record Day ~ Student Holiday
Week 7 (36) May 17 - May 21	Monday Gr. 12 Recollection (Morning) Monday Baccalaureate Mass (Afternoon, Schoolwide) Wednesday House Sports Day Thursday High School Field Trip Friday House Culminating Activity All Week Student Clearance Days & Special Events
Week 8 (37) May 24 - May 28	Monday Middle & High School Sports Day Monday LS Field Trip Tuesday Kindergarten Graduation/Gr. 5 Promotion Wednesday Gr. 8 Graduation and Gr. 12 Graduation Thursday Pre-Kindergarten & Gr. 1 - 4, 6 & 7, 9-11 Recognition Friday Last Day of School for Students