

# San Jacinto Unified School District New Course Proposal

For more information on how to complete this form please contact:

Janet Covacevich

Director, Secondary C & I

(951)929-7700 ext. 4263

[jcovacevich@sanjacinto.k12.ca.us](mailto:jcovacevich@sanjacinto.k12.ca.us)

The respondent's email address ([jryan@sanjacinto.k12.ca.us](mailto:jryan@sanjacinto.k12.ca.us)) was recorded on submission of this form.



## Signature Page must be printed and wet signed

Access Signature Page at this link <https://docs.google.com/a/sanjacinto.k12.ca.us/document/d/1TO2G1fXxR6WGNhinPY-oNxtY130cZHUQjTT3Ntv5Zg/edit?usp=sharing>

School \*

Mountain View High School/Mountain Heights Academy

New Course Proposal Submitted By: \*

Justin Ryan

Course Title \*

Probability and Statistics

Transcript Title (15 characters or less) \*

Please be sure to count each character and spaces used to be no more than 15.

Prob&Statistics

Course Code (assigned by Data Management, extension 4221):

OM0549

Academic Department \*

Mathematics

Graduation Requirement Met \*

Math

Honors (\*note: Honors courses seeking A - G status must offer a non-Honors equivalent course) \*

No ▼

Grade Level (check all that apply) \*

☐ 6th

☐ 7th

☐ 8th

☒ 9th

☒ 10th

☒ 11th

☒ 12th

Pre-Requisite (list all that apply) \*

Math 1, Math 2, Math 3

Co-Requisite (list all that apply) \*

N/A

Possible credits \*

10 - year long class ▼

## Course Learning Environment \*

☐ Classroom Based☒ Online/Hybrid

CALPADS Course Code (assigned by Data Mgt.)

9259 Probability and Statistics (non-advanced placement)

## Career Technical Education Courses

Will this course be part of CTE Pathways? \*

No ▼

Is this an Integrated Course (Academics with Career Technical Education) \*

No ▼

CTE Courses Only: Indicate the Level of the Course:

NOT CTE ▼

**CTE Courses Only: Indicate the Industry Sector****CTE Courses Only: Career Pathway & Code Pathway Name**

Submitting Courses That are Program Status, Courses Modeled After Another Institution, or Online, or AP

Course Plans for Program Status, Online, or AP must be attached to this form.

Will this course meet any of the descriptors above? \*

**Program Status Courses (can be auto approved) - Name the Exact Program and Course Title:**

Edmentum - PLATO Course Probability and Statistics

**Submitting a Course Modeled After Another Institution:**

When modeling after another institution's course, you will also need to enter a course overview specific to San Jacinto Unified School District as well as course content specific to SJUSD.

Any course modeled after another institution's course will not move forward until it has been written to reflect SJUSD's unique needs.



**Submitting a course modeled after another institution.**

Which school and ATP code? Must state exact course title.

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**Adopt an Online Publisher Course**

Edmentum, Inc. (previously PLATO)

**Adopt a Program Status Course**

Choose

**Advanced Placement (AP) Courses Only: Please answer the following questions:**

This section only applies to AP courses.

AP Courses Only: Date Submitted to CollegeBoard for AP Audit:

MM DD YYYY

/ /

Exact Course Title

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## CollegeBoard Authorization Code

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### Course Content

Please note: There are not specific requirements regarding the number of units each course should have.

For reference: University of California A-G Guide: <http://www.ucop.edu/agguide/a-g-requirements/index.html>

Copy and paste the link into your web browser for course samples.

**Course Overview: Provide a brief summary (3 - 5 sentences) of the course's content. \***

Probability and Statistics is a mathematics course that teaches two related, but distinguishable disciplines. Probability is the study of the likelihood that an event will occur. For example, what is the likelihood that you will win a writing contest if there are 3,000 entries? What are the chances that you will land that lead role in the school play if 30 students audition? In statistics, you will practice the science of collecting and analyzing numerical data in order to make decisions. The study of statistics upholds that of probability. You've likely worked with both disciplines to varying degrees during your math education.

In this course, you will represent and interpret data using dot plots, histograms, box plots, two-way frequency tables, and scatter plots. You will study normal distributions and distinguish between correlation and causation. You will also determine the conditional probability of two events or whether the events are independent. Using counting techniques and the rules of probability, you will calculate probabilities and use the results to make educated and fair decisions. You will evaluate several data collection techniques and statistical models, including simulations. The course closes with information on how you can use probability models to represent situations arising in everyday life that involve both payoff and risk.

---

**For EACH UNIT of the course, please provide:**

1. A unit title
2. A concise 3 - 5 sentences describing the topics being addressed that demonstrate the critical thinking, depth, and progression of the content covered.
3. A brief 3 - 5 sentences summarizing a key assignment from this unit and covering:
  - a. how a student will complete this assignment
  - b. what a student will produce
  - c. what the student will learn

Most importantly, use the unit(s) and key assignment(s) to demonstrate that the course meets the subject specific course criteria on the A - G Guide.

Units (outline each unit in the section provided. Indicate new units with a number and title) \*

#### Unit 1: Representing and Interpreting Data

##### Summary

In this unit, you will learn how to represent data using dot plots, histograms, and box plots. You will also understand the importance of showing and interpreting the center and spread of data as you compare two or more data sets. Finally, you'll use the concepts of center and spread to fit a data set to a normal distribution, also known as a bell curve.

#### Unit 2: Relating Data Sets

##### Summary

In this unit, you will investigate the relationships between sets of data using graphing techniques. For example, you will interpret the slope and intercept of a linear model and fit an algebraic function to data in a scatter plot. You will also compute the dependence or correlation of two variables in a linear plot and distinguish between correlation and causation.

#### Unit 3: Independent and Conditional Probability

##### Summary

In this unit, you will apply the addition and multiplication rules of probability to calculate probabilities using a uniform model. You will understand that an event is a set of outcomes that can be related to other events or can be independent of them. You will also use permutations and combinations to find the probabilities of compound events.

#### Unit 4: Applying Probability

##### Summary

In this unit, you will use probability models to assess situations that arise in the real world. You will apply counting rules to determine probabilities and use them to make fair decisions and analyze strategies. Finally, you will find and interpret the conditional probability of an event as it relates to other events.

#### Unit 5: Making Inferences and Conclusions

##### Summary

In this unit, you will form conjectures about populations based on a random sample of the population. You will work with simulations that imitate real-world data and judge their validity. You will study the differences in data gathering techniques in surveys, experiments, and observational studies, and you will analyze the data sets generated by each. You will complete the unit by evaluating reports based on data.

#### Unit 6: Using Probability to Make Decisions

##### Summary

Probability can help you weigh possible outcomes when faced with a difficult decision. In this unit, you will gain practical skills to use probabilities for decision making. You will develop and graph probability distributions by assigning random variables to quantities of interest. You will also make predictions using probability distributions and empirical data. You will determine the probability of a payoff value which defines the risks and rewards associated with a decision, and you will solve for probabilities that will help you make fair choices in more complex situations.



## Course Materials

Provide the COURSE MATERIALS that students use and analyze throughout the course. When appropriate, please incorporate these materials into the course's unit descriptions in the COURSE CONTENT section.

Some subject areas and disciplines require courses to include specific course materials. Please refer to the subject course criteria in the link above and/or the California Department of Education

(<http://www.cde.ca.gov/ci/cr/cf/imagen.asp>) for more information.

### Course Material

Please access the hyperlinked Google Slide deck for a sample of the required information for any course materials that will be used in the course.

### Google Slide Deck Link w/samples

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Select Course Material (select all that apply) \*

- ☐ Textbook
- ☐ Literary Text
- ☐ Manual
- ☐ Periodical
- ☐ Scholarly Article
- ☒ Website
- ☐ Primary Document
- ☐ Multimedia
- ☐ Other

Course Material: Primary \*

Edmentum website

Course Materials: Additional (if applicable)

### A-G Courses

For courses seeking A - G status please answer the questions below

Is this course being submitted for A-G status? \*

Yes

### Subject for A - G status

- ☐ "A" History/Social Science
- ☐ "B" English
- ☒ "C" Mathematics
- ☐ "D" Lab Science
- ☐ "E" Language Other Than English
- ☐ "F" Visual and Performing Arts
- ☐ "G" Elective

Name the Discipline (i.e. US History, LOTE, Theater, etc.)

Probability and Statistics

Is this an Integrated Course (Academics with Career Technical Education)

☐ Yes

☒ No

Does this course need to be retro-activated to a previous year?

No

If yes, which year(s)?

☐ 2017-2018

☐ 2016-2017

☐ 2015-2016

☐ 2014-2015

### Final Review

Please review your course prior to submission to ensure it meets all requirements, courses will not be moved forward until they have provided all the required information.

End of Course Submission

Before you submit, please verify that you have completed all required components for submission.

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☒ Online/Hybrid

CALPADS Course Code (assigned by Data Mgt.)

9259 Probability and Statistics (Non-Advanced Placement)

---

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Will this course be part of CTE Pathways? \*

No ▼

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CTE Courses Only: Indicate the Level of the Course:

Introductory ▼

CTE Courses Only: Indicate the Industry Sector

Choose ▼

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## Select Course Material (select all that apply) \*

- ☐ Textbook
- ☐ Literary Text
- ☐ Manual
- ☐ Periodical
- ☐ Scholarly Article
- ☒ Website
- ☐ Primary Document
- ☐ Multimedia
- ☐ Other

## Course Material: Primary \*

Edmentum website

---

## Course Materials: Additional (if applicable)

---

## A-G Courses

For courses seeking A - G status please answer the questions below

## Is this course being submitted for A-G status? \*

Yes ▼

## Subject for A - G status

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- ☐ "B" English
- ☒ "C" Mathematics
- ☐ "D" Lab Science
- ☐ "E" Language Other Than English
- ☐ "F" Visual and Performing Arts
- ☐ "G" Elective

Name the Discipline (i.e. US History, LOTE, Theater, etc.)

Probability and Statistics

---

Is this an Integrated Course (Academics with Career Technical Education)

- ☐ Yes
- ☒ No

Does this course need to be retro-activated to a previous year?

No ▼

If yes, which year(s)?

- ☐ 2017-2018
- ☐ 2016-2017
- ☐ 2015-2016
- ☐ 2014-2015



Please review your course prior to submission to ensure it meets all requirements, courses will not be moved forward until they have provided all the required information.

---

## End of Course Submission

Before you submit, please verify that you have completed all required components for submission.

---

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Google Forms





## New Course

## Signature/Approval Page

- I. Suggested Course Title: Probability and Statistics
- II. Department(s): Math
- III. School: MVHS/MHA
- IV. School Committee Members:
- |                              |                               |
|------------------------------|-------------------------------|
| a. Name: <u>Justin Ryan</u>  | Signature: <u>[Signature]</u> |
| b. Name: <u>Karin Lee</u>    | Signature: <u>[Signature]</u> |
| c. Name: <u>Jordan Smith</u> | Signature: <u>[Signature]</u> |
| d. Name: _____               | Signature: _____              |
| e. Name: _____               | Signature: _____              |
- V. Committee Meeting Date(s): 10/30/19
- VI. Department Chair Signature:
- |                              |                               |                       |
|------------------------------|-------------------------------|-----------------------|
| a. Name: <u>Jordan Smith</u> | Signature: <u>[Signature]</u> | Date: <u>10/30/19</u> |
| b. Name: _____               | Signature: _____              | Date: _____           |
- VII. Principal Signature:
- |                             |                               |                       |
|-----------------------------|-------------------------------|-----------------------|
| a. Name: <u>Ken Swanson</u> | Signature: <u>[Signature]</u> | Date: <u>10/30/19</u> |
|-----------------------------|-------------------------------|-----------------------|
- VIII. Course Proposal Reviewed by Educational Services:
- |  |                               |                        |
|--|-------------------------------|------------------------|
| a. Director, Educational Services: <u>Janet Covacevich</u> | Signature: <u>[Signature]</u> | Date: <u>1/10/20</u>   |
| b. Assistant Superintendent of Educational Services: _____ | Signature: <u>[Signature]</u> | Date: <u>1/10/2020</u> |
- IX. Course Proposal Approved by the Board of Trustees:
- |   |                  |             |
|---|------------------|-------------|
| a. SJUSD Board of Trustees President: _____ | Signature: _____ | Date: _____ |
|---|------------------|-------------|