

CAHSEE MATHEMATICS TEST PREPARATION

COURSE DESCRIPTION

CAHSEE stands for California High School Exit Exam. This course is designed to review / acquaint you with the topics that you will need in order to successfully pass the mathematics portion of the exam. These topics will include the following: probability, statistics, number sense, geometry, evaluating and writing expressions, graphing, solving equations, and logical reasoning. In this course, you will first be given a pre-test so you and your teacher will have an idea of where you stand and at the end; you will be given a post-test that will show you how much your understanding of mathematics has grown. You will also be given many helpful test taking techniques that will help you to build the confidence you need to pass this test!

PRE-REQUISITES / CREDIT HOURS

None / 5 credits

REQUIRED TEXTBOOK / MATERIALS

- This course is not textbook dependent

COURSE METHODOLOGY

- This is an inquiry-based course. Students will generate knowledge through online readings, synchronous chats, and asynchronous discussions with students and their instructor, interactions with online tutorials, online and hands-on simulations, and virtual classroom chats.
- A semester project developed by each student will be used to demonstrate knowledge and understanding of the material in the course.
- The instructor will act as a guide, a facilitator, an events planner, and a resource advisor. He/she will always be available through e-mail.
- The student must actively construct and acquire knowledge by being intrinsically motivated to succeed. To succeed, students must participate and complete all readings and activities. This course requires the student's active participation.
- Both formal and informal assessment methods will be used in the course. Informal assessment will include an evaluation of the quality and timeliness of participation in class activities. Formal assessment may include multiple-choice quizzes, tests, discussion board participation, and written assignments. A final exam will be given at the end of the course.

METHOD OF INSTRUCTION

1. Lecture Notes / PowerPoint Presentations
2. Virtual Chat sessions (Classlive Pro)

3. Discussions
4. Practical Application

COURSE LEARNING OUTCOMES

Upon completion of this course, students will be able to:

1. Organize outcomes of probability
2. Express probabilities
3. Understand Independent and Dependent events
4. Determine Mean, Median, and Mode
5. How to plot quartiles and Box-and-Whisker Plots
6. How to plot Stem-and-Leaf Plots
7. How to plot Scatter Plots
8. How to interpret fractions and integers
9. Understand Scientific Notation
10. Convert fractions, decimals, and percents
11. How to mark-up, discount and find interest through percents
12. How to express exponents, squares, and roots
13. How to use exponents with fractions
14. Determine Absolute Value
15. How to measure units and define scale drawings
16. How to use formulas
17. How to combine figures
18. How to scale
19. Utilize some coordinate geometry
20. Understand the Pythagorean Theorem
21. How to simplify expressions and variables
22. How to evaluate expressions
23. How to write expressions and equations
24. How to find the intercepts and other points on a line
25. How to find Slope
26. Understand the system of equations and parallel lines
27. How to graph in context
28. How to graph non-linear equations
29. How to use opposites and solving one-step equations
30. How to solve multi-step equations
31. How to solve the systems of equations
32. How to estimate to determine reasonable answers
33. How to identify necessary information in a problem
34. How to use deductive and inductive reasoning

COURSE OUTLINE

Unit	Activities
1 Probability	<ul style="list-style-type: none"> • Pre-Assessment • Vocabulary • Lecture: Test Taking Tips • Lecture: Probability

	<ul style="list-style-type: none"> • Lecture: Dependent and Independent Events • Videos • Assignment • Discussion • Learning Styles Assessment • Project • Quiz
2 Statistics	<ul style="list-style-type: none"> • Pre-Assessment • Vocabulary • Lecture: Statistics • Videos • Assignment • Discussion • Quiz • Project
3 Number Sense	<ul style="list-style-type: none"> • Pre-Assessment • Vocabulary • Lecture: Number Sense • Videos • Assignment • Discussion • Quiz • Project
4 Measurement and Geometry	<ul style="list-style-type: none"> • Pre-Assessment • Vocabulary • Lecture: Measurement and Geometry • Videos • Assignment • Discussion • Quiz • Midterm
5 Simplifying, Evaluating, and Writing Expressions and Equations	<ul style="list-style-type: none"> • Pre-Assessment • Vocabulary • Lecture: Skills and Concepts 1 • Videos • Assignment • Discussion • Quiz

	<ul style="list-style-type: none"> • Project
6 Graphing	<ul style="list-style-type: none"> • Pre-Assessment • Vocabulary • Lecture: Skills and Concepts 2 • Videos • Assignment • Discussion • Quiz • Project
7 Solving Equations and Inequalities	<ul style="list-style-type: none"> • Pre-Assessment • Vocabulary • Lecture: Skills and Concepts 3 • Videos • Assignment • Discussion • Quiz • Project
8 Test Taking Tips	<ul style="list-style-type: none"> • Lecture: The Perils of Test Taking • Lecture: How to Prepare for Tests • Assignment • Discussion • Final Exam • Turn-in Project • Additional Practice Test 1 • Additional Practice Test 2

COURSE REQUIREMENTS

Students are expected to complete all class activities, complete exams as scheduled, and turn in all assignments on time. Failure to do so may result in the loss of points. Minimum requirements to be met by the student should include demonstrating adequate achievement of the learning objectives listed above.

GRADING POLICY

DEFINITION OF GRADES

Percentage Points

90-100

Grade

A

80-89	B
70-79	C
60-69	F
Incomplete	I

A - Outstanding Achievement (Significantly Exceeds Standards)

B - Commendable Achievement (Exceeds Standards)

C - Acceptable Achievement (Meets Standards)

D - Marginal Achievement (Below Standards)

F - Failing

I - Incomplete: A grade given when a student who has completed **at least two-thirds of the course work** and is unable to complete the requirements of the course because of *uncontrollable* and *unforeseen* circumstances. Students must communicate these circumstances (preferably in writing) to the instructor prior to the final day of the course. If an instructor decides that an “Incomplete” is warranted, they provide the student with the conditions for removal of the “Incomplete” in writing and place a copy on file with the Coordinator of Student Services. The file copy remains in place until the “Incomplete” is removed or the time limit for removal has passed. The usual time allowed to make up an “Incomplete” grade is five weeks or by the end of the next class. An “Incomplete” is not assigned when the only way the student could make up the work would be to attend a major portion of the class when it is offered again. An “I” that is not removed within the stipulated time becomes an “F.” No grade points are assigned. The “F” will be calculated in the grade point average.

WRITING STANDARDS

Note: Letter grades may be assigned for any or all of the following reasons.

“A” range: Outstanding achievement significantly exceeds standards.

- Unique topic or unique treatment of topic, takes risks with comment; fresh approach
- Sophisticated/exceptional use of examples.
- Original and “fluid” organization; all sentences and paragraphs contribute; sophisticated transitions between paragraphs.
- Integration of quotations and citations is sophisticated and highlights the author’s argument.
- Confidence in use of Standard English, language reflects a practiced and/or refined understanding of syntax and usage.
- Sentences vary in structure, very few if any technical errors (no serious mechanical errors).

“B” range: Commendable achievement, exceeds standards for course.

- Specific. Original focus, content well handled.
- Significance of content is clearly conveyed; good use of examples; sufficient support exists in all key areas.
- Has effective shape (organization), effective pacing between sentences or paragraphs.
- Quotations and citations are integrated into argument to enhance the flow of ideas.
- Has competent transitions between all sentences and paragraphs.
- Conveys a strong understanding of Standard English; the writer is clear in his/her attempt to articulate main points, but may demonstrate moments of “flat” or unrefined language.
- May have a few minor mechanical errors (misplaced commas, pronoun disagreement, etc.), but no serious mechanical errors (fragments, run-ons, comma-splices, etc.).

“C” range: Acceptable, solid achievement, meets standards for course.

- Retains over-all focus, generally solid command of subject matter.
- Subject matter well-explored but may show signs of under-development.
- Significance is understood, competent use of examples.
- Structure is solid, but an occasional sentence or paragraph may lack focus.
- Quotations and citations are integrated into argument.
- Transitions between paragraphs occur but may lack originality.
- Competent use of language; sentences are solid but may lack development, refinement, style.
- Occasional minor mechanical errors may occur, but do not impeded clear understanding of material.
- No serious mechanical errors (fragments, run-ons, comma-splices, etc.).

“D” range: Marginal achievement; only meets minimum standards (Note: the “D” grade is a passing grade; work that is not of “passing quality” should receive grade “F”.)

- Significance of content is unclear.
- Lacks sufficient examples or relevance of examples may be unclear.
- Support material may not be clearly incorporated into argument.
- Expression is occasionally awkward (problematic sentence structure).
- Mechanical errors may at times impede clear understanding of material.
- May have a few serious mechanical errors, but no recurring serious mechanical errors (fragments, run-ons, comma-splices, etc.).

“F” range: Failure to meet minimum standards

- Ignores assignment.
- Lacks significance.
- Lacks coherence.
- Includes plagiarized material (unintentional or intentional).
- Lacks focus.
- Difficult to follow due to awkward sentence or paragraph development.
- Mechanical errors impede understanding.
- Problems with writing at the college level.

STUDENT RESPONSIBILITIES

1. If you are having difficulty with the course, computer problems, and/or personal problems, notify the instructor as soon as possible.
2. The faculty must be contacted prior to any due date to negotiate possible alternative arrangements.
3. As an online learner, you are responsible for determining the pace and schedule of your coursework. Be prepared to spend a significant amount of time completing this course. If you were to attend an on-campus class, you would be spending 40-48 hours in the classroom alone.
4. In order to be fair to all students in the class, the due dates for each assignment will be strictly adhered to. All written submissions must be typed in 12-point font and double-spaced. The papers should be logically organized.
5. Formal papers should conform to the MLA format.
6. Back up every piece of work you do on a disk or floppy and make a hard copy. If you experience computer difficulties, you are responsible for solving your own technical problems.
7. Odd things happen in cyberspace: emails get lost; servers disconnect temporarily; etc. Don't wait for the last moment to get things done. Allow time to meet deadlines. You are responsible for getting the work to me on time.

ATTENDANCE REQUIREMENTS

Please know that this course does require students to attend the course on a weekly basis. Please refer to the student handbook for the requirements for attendance for online classes.

CLASS PARTICIPATION REQUIREMENTS

This course requires the student to participate in the online discussion threads and Classlive Pro sessions. You will be graded on your participation. At least 5% of your grade will be based on participation. Please refer to the **Class Participation** page in the Course Home for the grading rubric for the

participation and a description of the **netiquette policies** required to be followed in all discussion posts.

1. Always respond to the person by name in your discussion post.
2. Always provide a citation to support your statements if it's not a well-known and accepted fact.
3. Check your work for typographical and grammatical errors before you submit your posts.
4. Make sure to avoid acronyms or abbreviations that are not commonly used in the general population.
5. Never use Wikipedia. Do not use unreliable web sites as a reference.
6. Never provide student names, email or contact information to anyone.
7. Never send spam to your classmates or instructor.
8. Never solicit online for anything, even for volunteers. Check with your instructor first to see if it would be appropriate to post.
9. Check your files for viruses before you upload them to the online classroom.
10. Keep your files that you upload small if possible and use a common word processor such as Microsoft Word.
11. Never use ALL CAPS unless you really mean it. It's shouting on the web.
12. Be courteous. Flaming emails and posts will be immediately removed and would impact your participation and final grade.

SUBMITTING WORK

Most of your work will be online in the discussion threads, online quizzes and exams, and Classlive Pro sessions and interactive activities. However, each week you will have 1 course assignment that will be required to be uploaded to the Dropbox each week. You must upload your homework to the DropBox by the due date and time. Late work will not be accepted. The Course Assignment must be submitted in a format that is 100% compatible with Microsoft Word 2006 or later and must be formatted using the MLA standards. When the assignment is assigned in week 1, you will be given a list of Web sites that contain examples and tutorials on MLA formatting. Each week you will work on a draft portion of the paper and in the final week you will assemble and edit and submit the final paper. Only the final paper will receive an official numeric grade, although you will receive feedbacks for the draft assignments.

STUDENT SERVICES

Library: The NU Library System (NULS) purchases access to several databases of full text articles from scholarly journals. Go to <http://www.nu.edu/library> and click on "Journal Articles". Student's user names are the first three letters of their first name and the first three letters of their last name (i.e. John Smith = JOHSMI). Student's passwords are their birthdays in yy/mm/dd format

Math Center: jisbell@nu.edu

Writing Center: wonline@nu.edu

PRE-COLLEGE PROGRAMS GENERAL POLICIES:

Ethics: Ethical behavior is required of every student. Students are also expected

to identify ethical policies and practices relevant to course topics.

Netiquette: You will be participating in online discussion, asking each other questions, and commenting on the discussion postings of others. It is important that you abide by the proper rules of “Netiquette” while interacting online. Imagine that the virtual class is like a face-to-face class wherein tolerance and respect for all participants is encouraged and the language used to express ideas reflects sincere effort and neither contains profanity nor abusive verbiage. Students who do not conduct themselves properly will be held responsible for their online behavior. Here is a sample link to an informative source on Netiquette:

<http://www.albion.com/netiquette/corerules.html>

Technology: Students are expected to be competent in using word-processing, spreadsheet, and presentation software in this course. Use of the Internet and E-Mail is required.

Help Desk: Please feel free to contact the eCollege Help Desk if you have trouble logging in or technical difficulties.

Plagiarism: Students are required to cite the use of materials written by others in all written communications for courses. The use of ideas, words, or phrases without proper attribution constitutes plagiarism. Plagiarism is the presentation of someone else’s ideas or work as one’s own. Students found plagiarizing are subject to the penalties outlined in the Policies and Procedures section of the NUVHS Catalog, which may include a failing grade for the work in question or for the entire course. The burden of proof rests on the student, not the instructor, in other words, the student will be required to prove that plagiarism has not occurred. Inadequately or improperly cited work will receive no credit. Plagiarism is a violation of the NUVHS’s Code of Student Conduct and is subject to discipline up to and including dismissal from the College.

Diversity: Learning to work with and value diversity is essential in every degree program. Students are required to act respectfully toward other students and instructors throughout the course. Students are also expected to exhibit an appreciation for multinational and gender diversity in the classroom and develop leadership skills and judgment appropriate to such diversity in the workplace.

Disability: National University Division of Pre-College Programs complies with the American Disabilities Act of 1990 and Section 504 of the Federal Rehabilitation Act of 1973. If you need accommodations due to

documented disability, please contact the Coordinator of Student Services at (866) 366-8847. Information received by this office is confidential and is only released on the 'need-to-know' basis or with your prior written consent.

NUVHS Expected Schoolwide Learning Results (ESLRs):

It is anticipated that NUVHS students will be:

Engaged Learners

1. Demonstrate self-directed learning skills such as time management, and personal responsibility through the completion of course requirements
2. Develop an understanding of their own preferred learning styles to enhance their overall academic potential
3. Incorporate effective and relevant internet and multimedia resources in their learning process to broaden their knowledge base

Critical Thinkers

1. Effectively analyze and articulate sound opinions on a variety of complex concepts
2. Illustrate a variety of problem-solving strategies that strengthen college preparation and workforce readiness
3. Formulate a framework for applying a variety of technology and internet-based research to enhance information literacy and collaborative thinking

Effective Communicators

1. Demonstrate awareness and sensitivity to tone and voice in multiple forms of communication
2. Express concepts and ideas in a variety of forms
3. Enhance communication skills through the use of media rich or other technology resources

Global Citizens

1. Appreciate the value of diversity
2. Understand the range of local and international issues facing today's global community
3. Demonstrate awareness of the importance of cultural sensitivity and social responsibility in the 21st century