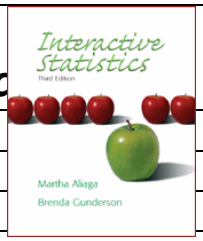
Syllabus for: (name of class)

Math 15-V5586 (035586) ***Elementary Statistic***



Semester & Year:	Spring 2014
Course ID and Section Number:	Math 15-V5586 (035586)
Number of Credits/Units:	4 units (72 contact hours)
Day/Time:	1/21/2014 - 5/16/2014
Location:	The class is online.
Instructor's Name:	Teresa ("Tami") Matsumoto
Contact Information:	Office location and hours: SC 205-B, Eureka Campus; M 3:30-4:30, TWThF 1:30-2:30 Phone: (707)476-4543, Fax: (707)476-4424 Email: tami-matsumoto@redwoods.edu

Course Description (catalog description as described in course outline):

MATH-15 Elementary Statistics - (4 units lecture)

The study of statistical methods as applied to descriptive statistics and inferential statistics. An emphasis on the meaning and use of statistical significance will be central to the course. Students will use frequency distributions, graphs, measures of relative standing, measures of central tendency, measures of variability, correlation, and linear regression to explore descriptive statistics. Students will use the laws of probability and statistical tests (t-tests, chi-square, ANOVA, and regression analysis) to make decisions via hypothesis testing and estimate parameters using confidence intervals.

Special Note: A TI-83 or TI-84 graphing calculator is required.

Prerequisite: Math 120 or Math 194 with grade of "C" or better

Recommended Preparation: English 150

Student Learning Outcomes (as described in course outline) :

What should the student be able to do as a result of taking this course?

Some objectives in terms of specific, measurable student accomplishments are:

1. Accurately communicate statistical ideas using correct statistical notation, graphs, and vocabulary.
2. Use descriptive and inferential statistics to solve real-world problems.
3. Demonstrate appropriate use of technology in making decisions based upon real-world data.
4. Read and interpret information that contains statistical analysis and be able to communicate these results.
5. Judge the validity of research reported in the mass media and peer reviewed journals.

Refer to http://msenux.redwoods.edu/mathdept/outlines/current/math15.php

Special accommodations: College of the Redwoods complies with the Americans with Disabilities Act in making reasonable accommodations for qualified students with disabilities. Please present your written accommodation request at least one week before the first test so that necessary arrangements can be made. No last-minute arrangements or post-test adjustments will be made. If you have a disability or believe you might benefit from disability related services and may need accommodations, please see me or contact Disabled Students Programs and Services. Students may make requests for alternative media by contacting DSPS.

Academic Misconduct: Cheating, plagiarism, collusion, abuse of resource materials, computer misuse, fabrication or falsification, multiple submissions, complicity in academic misconduct, and/ or bearing false witness will not be tolerated. Violations will be dealt with according to the procedures and sanctions proscribed by the College of the Redwoods. Students caught plagiarizing or cheating on exams will receive an "F" in the course.

The student code of conduct is available on the College of the Redwoods website at:
http://redwoods.edu/District/Board/New/Chapter5/AP%205500%20Conduct%20Code%20final%2002-07-2012.pdf

Additional information about the rights and responsibilities of students, Board policies, and administrative procedures is located in the college catalog and on the College of the Redwoods homepage.

College of the Redwoods is committed to equal opportunity in employment, admission to the college, and in the conduct of all of its programs and activities.

Math 15 Elementary Statistics (V5586)

Information follows in the following sections:

1. **About Learning Statistics**
2. **Materials you will need**
3. **Some notes about online courses**
4. **Some notes about technology**
5. **How this online course will work**
6. **Communication**
7. **Math 15 Learning Units — What material will we cover? (with due dates)**
8. **Math 15 GRADING CRITERIA — What do you have to do to earn an "A" (or just to pass the class)?**
9. **Course Calendar**

1. About Learning Statistics

To learn statistics, you must learn a lot of new terminology (including "old" vocabulary with new meanings), special symbols, formulas, relationships, and concepts. And that's not all! You also must learn how and when to apply which formulas, and how to interpret your statistical results. It isn't enough to know how to do the algebraic manipulations, or how to find things on your calculator. You will need to learn which are the correct formulas (or statistical tests), that are appropriate to use in the given situation. Also, unlike the majority of your previous math experience, there often is not just one "right" answer. You will need to understand the assumptions behind the different answers and how to assess which you feel is best for that particular case.

Some statistics students feel like the whole class is full of word problems and sometimes even students with excellent algebraic skills struggle with the statistical concepts and interpretations. On the other hand, some people who have had bad prior experiences with math classes really enjoy the way statistics is much more real and meaningful and applicable to the real world.

You will need to learn (a la Bloom):

- Knowledge
    - Definitions
    - Types of Graphs
    - Different Formulas
    - Main Ideas
- Comprehension
    - How related things compare (similarities, differences)
    - What different things mean or tell us
    - How to interpret summary information
    - How to make predictions based on limited information
- Application
    - How to apply what you know to new situations
    - How to use information (statistics or data, for instance)
    - How to solve problems, using what you have learned
- Analysis
    - How to make inferences from analysis of complex information
    - Recognizing importance and significance of component parts
- Synthesis
    - How to understand a situation and pull together all that you have learned, to construct an appropriate statistical test and make valid conclusions and inferences
- Evaluation
    - How to look back and assess what was done (by you or others) and compare and evaluate the results

2. Materials you will need:

- **Required Text**: *Interactive Statistics*, 3rd Edition, by Aliaga & Gunderson. Published by Prentice Hall. 2006.
- **Graphing Calculator**: A TI-83 or TI-84 graphing calculator is required. A limited number are available **for rent** – get one from the Math Lab in the ASC.
- **Something like a Bound Notebook with Grid Paper**: Roaring Spring #77475 or Ampad #26-251 (about $2 - $6), for example. It should be **bound** and have **graph paper** in it. You will use this throughout the course to build yourself a reference book.
- **Supplemental Handouts**. There will be a lot of supplementary material. It is your responsibility to make sure that you get and read all supplemental material.
- **Time. Lots!!** In your own weekly schedule please make sure that you have blocked out at least 15 to 20 hours per week to devote to this online class. We cover 15 chapters in 15 weeks and the book is about 1000 pages! Do the math! Note that some people believe online classes to be easier, but in reality, online classes can take more of your time. The main advantage are that there is no travel time and you can do the class during whatever time of day is most convenient.
- **Paper**: Homework Paper and scratch paper, lots of it! It is fine with me if you RE-USE paper. Paper that's only been used on one side is still fine (in general) on the other side. You will also need some graph paper. Get it in a pad or a package of loose-leaf sheets (rather than stuck in a notebook), or print it from the web. Many people find it helpful to get graph paper with heavier lines on every fifth line to make counting easier.
- **Pencils**: Lots. Math problems should be done in pencil in this class (as in math classes in general). If you like softer lead (I find it writes darker easier) then you might like "2B" mechanical pencil lead (I prefer "2B" to "HB" which I find not as easy to work with).
- **Erasers**: At least one.
- **A ruler**: Important for drawing tables and graphs carefully and correctly.
- **Technology for submitting homework electronically:** Examples include digital camera, smart phone, scanner.

- **Computer Access** for:
  - **Email:** I expect you to have access to a computer and expect to be able to contact you easily. The College uses your "mycr.redwoods.edu" email address to communicate with you so it is important that you receive those email messages; you can set it up to autoforward those emails to another email address if you prefer.
  - **"myCR" course management system**. Our "home base" for course materials will be the "myCR" course system. (This is a separate thing from your email but you need access to a computer for this also.)
  - **Other online resources**. We will have other resources online in addition to "myCR."

3. Some notes about online courses:

About Online Courses: Please look over the information at the CR Distance Ed page: http://redwoods.edu/departments/distance/ In particular, please read " How to use MyCR (Sakai), Web/Advisor and CR e-mail" if you are new to CR and/or new to myCR (Sakai). Please check out the great resources on this website, such as the online readiness survey, tips for students, and tutorials.

Online Etiquette: Learning is an active experience; you will benefit most and enjoy the class more by participating fully. When working online, you should give it your full attention, just as if you were in a "live" class. Most students find their first Statistics class to be unlike any other class they have had – there are some difficult concepts – if you have a question, others probably do as well, so be the one speak up, and ask general questions in the Forums, so that others can benefit (just like in a "live" class). Unlike other math classes, with statistics, there is often more than one answer, and things are subject to interpretation. Give and take is important – so "listen" with an open mind, and respond respectfully to the views of others. Advocate strongly if you wish, but intimidation or profanity are unacceptable.

4. **Some notes about technology:** For online courses, computer skills are a must! You need to be able to navigate websites, open files, download files, use a word processor, convert files into PDF (Portable Document Files) or RTF (Rich Text Format). You will need to use spreadsheets. You will need to use a graphing calculator. You will need to draw graphs and submit them. You should be able to upload files to myCR (Sakai) in the Drop Box. You will need to complete online assignments. It is each student's responsibility to meet the technological demands of the course.

   Most computers and internet providers are adequate. Broadband services such as cable, DSL, or satellite will make your online experience easier. You need to have reliable access to the internet at least three times a week for fifteen weeks.

5. **How this online course will work:**

Content is in 6 Learning Units: The course material is divided up into six Learning Units. Each Learning Unit includes textbook material to read, textbook exercises to do, outside reading, discussion forum assignments, and a data project. You will also all contribute to the class wiki in myCR. There is more information below, but, briefly, the six Learning Units are:

- Unit 1: Laying the Foundation and "Framing the House" (Chapters 1, 4, 5)
- Unit 2: Probability in Sampling and Modeling Variables (Chapters 2, 6, 7)
- Unit 3: Sampling Distributions; Making Conclusions about Means and Proportions(Chapters 8, 9, 10)
- Unit 4: Comparing Two or More Populations (Chapters 3, 11, 12)
- Unit 5: Regression Analysis (Chapter 13)
- Unit 6: Categorical and Non-Normal Variables (Chapters 14, 15)

Lessons in myCR: Each Learning Unit is broken up into five or six Lessons which you access in myCR. Each Lesson is intended to have the amount of material that would be covered in approximately 1.5 hours of "instruction" if this were a face-to-face class, along with approximately 3 to 5 hours of corresponding "homework" and related study. There are approximately three Lessons per week. It is ok to work ahead of the schedule, but it is not ok to get behind. You are expected to read the instructions in each Lesson carefully — This will tell you which pages of the textbook to read and will alert you to things of particular importance and also parts that you can skim. This class covers a LOT of information and it is extremely important that you keep up. There will be a few parts of the textbook that we will skip, but we will cover about 60 pages each week.

Homework: Each Lesson has a homework assignment associated with it. The homework assignments and due dates will be listed in the Lesson information in myCR.

Turning in Assignments: To turn in assignments, one option is to submit them via myCR in your Drop Box. To do this, you can create the assignment electronically, or submit scanned copies, or submit an electronic photo file (.jpg) of your work. To submit work on paper, drop it off at my office (slide it under the door), or mail it or fax it.

Quizzes and Exams: Each Learning Unit will have a Unit Exam. Some will be untimed ("take-home") and some will be timed (1 hour). You will be given a 48-hour period during which you must complete the Exam. There will also be short quizzes for you to complete. There will be a comprehensive final exam at the end of the semester, which should be taken during finals week May 12-16. More details will follow.

Participation: Participation in and attending to class activities are essential to the learning process. Furthermore, everyone benefits from your input and participation, including you! One important aspect of this course is the incorporation of active learning; this requires everyone's participation, particularly during collaborative work such as the discussion forums. Also, the best way to insure having a successful experience in any course is to keep up with the material and do all the assignments.

I realize that sometimes things come up and completing work on time may be impossible. In those cases, be sure to communicate with me as soon as you possibly can. This is especially important if you are unable to complete a scheduled exam on time!

Note that ALL students remain responsible for ALL assignments given and that those assignments are expected to be submitted ON TIME. If you get behind, the assumption is that you will get the necessary information to complete any assignments and get back on track as soon as possible to be able to continue in the normal flow of the course.

CAUTION: the material builds from one week to the next and so
IT IS STRONGLY URGED THAT ALL STUDENTS STRIVE TO STAY ON TOP OF EVERYTHING.

Problem Sets, assigned from the textbook: Problems will be assigned from the textbook. There will be "Basic" problems and "Advanced" problems. If you are not aiming for a course grade of "B" or "A" then you do not need to do the "Advanced" problems – some of which are genuinely more difficult, and others of which are not necessarily difficult but might be very time-consuming. I recognize that most people have other things in their lives besides this one class, and that sometimes life gets in the way of devoting all of your energy to one class, and at times, it is all a person can do just to pass, and this is why there are "Basic" and "Advanced" problems (see also the grading information). Due dates will be posted with each assignment.

Show your work, and work neatly and legibly. There will not be time for every problem to be graded carefully, so it is very important that you check your own work before turning it in, and ask questions if you want to make sure you are on the right track.

Doing homework exercises is an important part of the process by which you learn the material. It is recommended that you also work through the examples as you read, and work additional problems besides those assigned.

Other assignments: There will be assignments other than problems from the book, such as analyzing articles. These will be explained in greater detail as they come up, but I want you to be aware that there is more to "homework" than just problems in the book.

Reference Book: Each student is required create his/her own personal Statistics Reference Book throughout the term. It should be made in a bound notebook. It should have a title page at the front, followed by a table of contents. The contents should include material learned in the course. For the most part, it is up to you to decide exactly what to include, though there will be a few items I will direct you to be sure to include. Each page should be its own separate topic. I will ask for photos of whatever you have in your Reference Book about every couple weeks, around the times of the Unit Exams.

Exams: There will be an exam after each learning unit and a Final Exam during Finals Week. Each of the unit exams will cover material in that learning unit. The Final Exam will be comprehensive and will be given in parts so that you do not have to do it all in one sitting. You do not need a scantron for any of these tests.

Final exam week: May 12-16, 2014. The Final Exam should be done during Finals Week.

HELP?! If you have questions, please get help! It is ***your*** responsibility to seek help if you need it. I can help you via telephone, email, myCR, or in person in my office or in the Math Lab. I will answer some questions in myCR – in the forums and chat room, and can, of course answer questions during office hours. I am also scheduled to work in the Math Lab Mondays 1:30-3pm, and Fridays 9:30-11am. Other sources of help will be listed in myCR, and the list will probably be added to during the semester.

DUE DATES and LATE WORK: Caveat on "due dates": While we are, by necessity, confined within a certain time framework, it is important to me that you understand the material – that being said, if you have made progress on an assignment but are having trouble completing it by the due date, communicate with me to make appropriate arrangements.

Recommendation: Sign up for The Math Lab (**Math 52**) for virtually-free drop-in tutoring at CR's Eureka campus. Register for either the 0.5 unit or the 1.0 unit section. You can attend any time during Math Lab Open Hours: M-Th 9:30am-5pm, Fri 9:30am-3pm. The Eureka Math Lab is in the ASC in the LRC.

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6. **Communication**: Our primary "home base" for communication will be the myCR (Sakai) course management system (http://mycr.redwoods.edu). Here are some various modes of communication and anticipated timeframes for communication in this course.

Ways information will be disseminated to the class as a whole:

What	How / where	How often
Announcements – General Information pertaining to the course and information of potential interest to students	myCR (Sakai) "Announcements"	Posted at least once each week. You should make a point of checking 3 times a week.
Instructions – Reading assignments and other instructions (for example data projects)	myCR (Sakai) "Lessons"	Each of 6 Learning Units will be posted about every two weeks
Reminders – Weekly reminders will be posted and emailed to summarize what you should be doing that week	myCR (Sakai) "Announcements" and email using your mycr.redwoods.edu email address	Weekly
Very General Information of potential interest to students will be posted on twitter and/or facebook.	twitter: https://twitter.com/TamiMathCR, facebook: https://www.facebook.com/TamiMathCR	Usually once a week or more often, as things come up

What to do if you have questions:

What	How / where	How often
General Questions – Post questions of a general nature in a Forum in myCR. Just like in a regular class, often one person asks a question that many people have.	myCR (Sakai) "Forums"	Post whenever you like. Anyone in the class can respond, and I will check that there is a response within one school day.

Individual Questions – For questions that are <u>not</u> of a general nature, here are some options:
• phone me at (707) 476-4543
• feel free to email me at any time
  ◦ use regular email from a computer, or
  ◦ send a text message to my email, or
  ◦ use myCR "Mailtool"
• myCR "Messages"
	Phone: (707) 476-4543
	
	Email Tami <tami-matsumoto@redwoods.edu>
		Whenever you like. I will respond within one school day, and generally much quicker than that.

Face-to-face communication – if you want to meet in person and are able to come to the Eureka campus, I'm happy to meet with you to answer questions	Math Lab: I am there Mon 1:30-3, or Fri 9:30-11. Office hours: Mon 330-430, TWThF 130-230, and also by chance and by appointment	Note: Unless you make an appointment, I might be busy with other students and might not be able to give you my full attention at that time. If more time is needed, we can schedule an appointment, usually within a few days.
Online/Telephone Office Hours – weekly online and/or conference phone office hours will be established after students are surveyed to find a time that is suitable to most, if not all	myCR (Sakai) "Chat Room," and/or Conference Call using CCC Confer, and/or "online office hours" using CCC Confer	At least once a week, and also can be set up by appointment.

7. Math 15 Learning Units — *What material will we cover? (with due dates)*

The course material is organized into six Learning Units. Each Unit includes more than one Chapter except Unit 5. Each Unit has an associated Data Assignment. There will be a Unit Exam at the end of each Unit.
Here is a brief overview. Details will be posted in myCR (Sakai)

Unit	Chapters and Data Collection Assignment
1	Chapter 1: How to Make Decisions with Statistics (pp 1-52, 62-66) Chapter 4: Summarizing Data Graphically (pp 211-284) Chapter 5: Summarizing Data Numerically (pp 299-333, 344-5) Data Assignment #1: Quantitative Data, 1 variable from 2 related populations; turn in graphs for comparisons and summary statistics for comparisons (will use same data again later in Unit 4). *See detailed instructions before starting. Three possible ideas are due Jan 24, with the final work due Feb 7 (Extra Credit if turned in Feb 4).* Unit 1 Exam: Feb 5-6
2	Chapter 6: Using Models to Make Decisions (pp 357-397) Chapter 7: Probability (pp 409-439, 454-470, 478-489) Chapter 2: Sampling Designs (pp 83-135) Data Assignment #2: Bivariate Quantitative Data, 2 variables from 1 Population (Due Feb 26, Extra Credit Feb 21). Ideas for Data Assignment #2 can be submitted by Feb 10 (optional) for Extra Credit. Unit 2 Exam: Feb 24-25
3	Chapter 8: Sampling Distributions (pp 499-545, 555-7) Chapter 9: Making Decisions About Population Proportions (pp 563-594, 602-7) Chapter 10: Making Decisions About Population Means (pp 613-33, 639-53, 657-8) Data Assignment #3: *Proportion*: Binomial data, 1 categorical variable from 1 population (Due March 13; Extra Credit if turned in March 10) Unit 3 Exam: March 11-12
4	Chapter 3: Observational Studies & Experiments (pp 145-196) Chapter 11: Comparing Two Treatments (pp 669-727) Chapter 12: Comparing Many Treatments (pp 743-761, 791-3) Data Assignment #4: Use same data from Data Assignment #1; use T-Test and Confidence Intervals to compare (Due April 1; Extra Credit if turned in March 28) Unit 4 Exam: April 2-3
5	Chapter 13: Regression Analysis (pp 807-901) Data Assignment #5: Use bivariate data set from previous data collection (Due April 15; Extra Credit if turned in April 11) Unit 5 Exam: April 17-18
6	Chapter 14: Analysis of Count Data (pp 921-966) Chapter 15: Nonparametric Statistics (pp 977-1002) Data Assignment #6: Multinomial Data (Categorical), 1 categorical variable from 1 population (Due May 1; Extra Credit if turned in April 29) Unit 6 Exam: May 5-6

Note: Comprehensive Final Exam on Units 1-6 during Finals Week (May 12-16).

8. Math 15 GRADING CRITERIA – *What do you have to do to earn an "A" (or just to pass the class)?*

To pass the class (i.e., not get an "F"), all the following requirements must be met:

- Homework Exercises assigned from the textbook:
  - complete a majority of the "basic" exercises assigned, in a legible, satisfactory way
- Create your own Statistics Reference Book
- Quizzes and Exams –at least 60% correct
- Data Projects – complete a majority of assignments
- Other Assignments – complete a majority of assignments

To get at least a "C-" you must do all of the following:

- Homework Exercises assigned from the textbook:
  - complete at least 80% of the "basic" exercises assigned, in a legible, satisfactory way
- Create your own Statistics Reference Book with at least basic content from the course
- Quizzes and Exams –at least 65% correct
- Data Projects – at least two-thirds
- Other Assignments – at least two-thirds

To get at least a "B-" you must do all of the following:

- Homework Exercises assigned from the textbook:
  - complete all the "basic" exercises assigned, in a legible, satisfactory way
  - work on at least one-fourth of the "advanced" exercises
- Create your own Statistics Reference Book with a Title Page, Table of Contents, and (more than minimal) definitions of terms from each Learning Unit
- Quizzes and Exams –at least 75% correct
- Data Projects – at least 80%
- Other Assignments – at least 80%

To get at least an "A-" you must do all of the following:

- Homework Exercises assigned from the textbook:
  - complete all the "basic" exercises assigned, in a legible, satisfactory way
  - work on more than half of the "advanced" exercises
- Create your own excellent Statistics Reference Book with a Title Page, and Table of Contents, including up-to-date definitions of terms from each Learning Unit, with color, accompanied by graphs and examples.
- Quizzes and Exams –at least 85% correct
- Data Projects – at least 90%
- Other Assignments – at least 90%

CAVEAT:	The course procedures are subject to change.

9. Course Calendar – Math 15 V5586 – Spring 2014

Week#	Monday	Tuesday	Wednesday	Thursday	Friday	
1	Jan 20 CR / HSU Holiday (MLK Jr)	Jan 21 CR Math Classes Begin Start Unit 1	Jan 22	Jan 23	Jan 24 Data Assignment #1: Three ideas due	
2	Jan 27	Jan 28	Jan 29 (should start data collection)	Jan 30	Jan 31 *Deadline to Drop w/o "W" & rec've refund*	
3	Feb 3 CENSUS DAY	Feb 4 E.C. for Data Assnmt #1	Feb 5 Unit 1 Exam (48 hr) Start Unit 2	Feb 6	Feb 7 Data Assnmt #1 Due	
4	Feb 10 Data Assnmt #2 ideas (Optional, E.C.)	Feb 11	Feb 12	Feb 13	Feb 14 No Classes (Lincoln)	
5	Feb 17 CR Holiday (Washington)	Feb 18	Feb 19	Feb 20	Feb 21 E.C. for Data Assnmt #2	
6	Feb 24 Unit 2 Exam (48 hr) Start Unit 3	Feb 25	Feb 26 Data Assnmt #2 Due	Feb 27	Feb 28	
7	Mar 3	Mar 4	Mar 5	Mar 6 *Deadline to Petition to Graduate/Apply for Cert*	Mar 7	
8 DST*	Mar 10 E.C. for Data Assnmt #3	Mar 11 Unit 3 Exam (48 hr) Start Unit 4	Mar 12	Mar 13 Data Assnmt #3 Due	Mar 14 *π Day!*	
CR/HSU Spr Brk	Mar 17	Mar 18	Mar 19	Mar 20	Mar 21	Mar 22
9	Mar 24	Mar 25	Mar 26	Mar 27	Mar 28 E.C. for Data Assnmt #4	
	April is Math Awareness Month!		*(Humboldt Math Festival on Saturday, April 5, 10am-2pm)***			
10	Mar 31 (HSU Holiday) ***Cesar Chavez Day***	Apr 1 Data Assnmt #4 Due	Apr 2 Unit 4 Exam (48 hr) Start Unit 5	Apr 3	Apr 4 *W/Drawal Deadline*	Apr 5 Humboldt Math Festival
11	Apr 7	Apr 8	Apr 9	Apr 10	Apr 11 E.C. for Data Assnmt #5	
12	Apr 14	Apr 15 Data Assnmt #5 Due	Apr 16	Apr 17 Unit 5 Exam (48 hr) Start Unit 6	Apr 18	
13 20th Easter	Apr 21	Apr 22	Apr 23	Apr 24	Apr 25	
14	Apr 28	Apr 29 E.C. for Data Assnmt #6	Apr 30	May 1 Data Assnmt #6 Due	May 2	
15	May 5 Unit 6 Exam (48 hr)	May 6	May 7	May 8	May 9 *Eureka MSE BBQ (Tent)*	
CR/HSU FINALS WEEK	May 12 Comprehensive Final	May 13 during Finals Week	May 14	May 15	May 16	May 17 CR Eureka Commencement

**April 5, 2014: Humboldt Math Festival <http://www.humboldtmathfestival.org/>

Commencement: May 16, DN; May 17, Eureka and KT; May 18, MC. Grades Due: May 23, 2014.