Syllabus for Math-15-E3413		
Semester & Year	Spring 2018	
Course ID and Section #	Math-15 E3413	
Instructor's Name	Mr. Jon Pace	
Day/Time	T TH F 11:40 – 12:55 PM	
Location	SC 208	
Number of Credits/Units	4 units	
Contact Information	*Office hours*	W F: 10:30 – 11:30 AM T TH: 2:00 – 3:00 PM Or by appointment
	Phone #	(707) 476-4222
	Email address	jonothan-pace@redwoods.edu or via Canvas
Textbook Information	*Title & Edition*	Interactive Statistics, 3rd Edition
	Author	Aliaga & Gunderson
	ISBN	ISBN #: 0-13-149756-1 or ISBN 10: 0131497561 ISBN 13: 9780131497566

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

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 probability techniques to make decisions via hypothesis testing and will estimate parameters using confidence intervals. Topics include descriptive statistics; probability and sampling distributions; statistical inference; correlation and linear regression; analysis of variance, chi-square and t-tests; and application of technology for statistical analysis including the interpretation of the relevance of the statistical findings. The course includes applications using data from disciplines including business, social sciences, psychology, life science, health science, and education.

Special notes or advisories: A TI-83 or TI-84 graphing calculator is required

Syllabus for Math-15-E3413

Student Learning Outcomes (as described in course outline) :

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

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 at 707-476-4280.

Academic Support

Academic support is available at Counseling and Advising and includes academic advising and educational planning, Academic Support Center for tutoring and proctored tests, and Extended Opportunity Programs & Services, for eligible students, with advising, assistance, tutoring, and more.

Academic Honesty

In the academic community, the high value placed on truth implies a corresponding intolerance of scholastic dishonesty. In cases involving academic dishonesty, determination of the grade and of the student's status in the course is left primarily to the discretion of the faculty member. In such cases, where the instructor determines that a student has demonstrated academic dishonesty, the student may receive a failing grade for the assignment and/or exam and may be reported to the Chief Student Services Officer or designee. The Student Code of Conduct (AP 5500) is available on the College of the Redwoods website at:
www.redwoods.edu/district/board/new/chapter5/documents/AP5500StudentConductCodeandDisciplinaryProceduresrev1.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 website.

Disruptive Classroom Behavior

Student behavior or speech that disrupts the instructional setting will not be tolerated. Disruptive conduct may include, but is not limited to: unwarranted interruptions; failure to adhere to instructor's directions; vulgar or obscene language; slurs or other forms of intimidation; and physically or verbally abusive behavior. In such cases where the instructor determines that a student has disrupted the educational process a disruptive student may be temporarily removed from class. In addition, he or she may be reported to the Chief Student Services Officer or designee. The Student Code of Conduct (AP 5500) is available on the College of the Redwoods website at:

www.redwoods.edu/district/board/new/chapter5/documents/AP5500StudentConductCodeandDisciplinaryProceduresrev1.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 website.

Emergency Procedures for the Eureka campus:

Please review the campus evacuation sites, including the closest site to this classroom (posted by the exit of each room). The Eureka **campus emergency map** is available at: (http://www.redwoods.edu/Eureka/campus-maps/EurekaMap_emergency.pdf). For more information on Public Safety, go to http://redwoods.edu/safety/ In an emergency that requires an evacuation of the building:

- Be aware of all marked exits from your area and building.
- Once outside, move to the nearest evacuation point outside your building:
- Keep streets and walkways clear for emergency vehicles and personnel.
- Do not leave campus, unless it has been deemed safe by the Incident Commander or campus authorities. (CR's lower parking lot and Tompkins Hill Rd are within the Tsunami Zone.)

RAVE – College of the Redwoods has implemented an emergency alert system. In the event of an emergency on campus you can receive an alert through your personal email and/or phones at your home, office, and cell. Registration is necessary in order to receive emergency alerts. Please go to https://www.GetRave.com/login/Redwoods and use the "Register" button on the top right portion of the registration page to create an account. During the registration process you can elect to add additional information, such as office phone, home phone, cell phone, and personal email. Please use your CR email address as your primary Registration Email. Your CR email address ends with "redwoods.edu." Please contact Public Safety at 707-476-4112 or security@redwoods.edu if you have any questions.

Materials you will need:

- **Required Text**: *Interactive Statistics*, 3rd Edition, by Aliaga & Gunderson.
  Published by Prentice Hall. 2006.

  ISBN: 0-13-149756-1

  ISBN 10: 0131497561; ISBN 13: 9780131497566

Graphing Calculators: A graphing calculator is required for this course. You may rent one from the Math department for $15 per semester. Follow this link for more specific details: https://www.redwoods.edu/math/Resources/Calculator-Rentals

Phone Apps: For Droid OS: Wabbitemu (free)

After downloading:

1. Choose **"Help me create a ROM …"** option
2. Choose TI-84 Plus C SE (very bottom)

For Iphone OS: GraphNCalc83 ($0.99)

- **Reading Time.** It is critical to your success in this course that you read the book. You should budget this time requirement into your weekly time allotted for this course.

Recommended

1. Math Lab: Math15L (1 or ½ unit) or Math 252 (non-credit) - https://www.redwoods.edu/math/Lab
2. I would recommend forming study groups to work on homework & prepare for exams.
3. The Academic Support Center in the library offers individual & group tutoring by appointment

Classroom Environment

It is essential to our class that both students and teacher behave in a manner that will provide a comfortable learning atmosphere. Be respectful of one another. We are all adults and an open, comfortable environment is crucial for learning. Therefore, you should not hesitate to ask any questions, feel embarrassed to ask any question, or seek help. **Turn cell phones to vibrate before entering the classroom**.

Exams

There will be 5 exams comprising 30% of the course grade and a cumulative final exam worth 10% of your course grade. I will notify you at least one week in advance as to the date of each exam (***see course schedule***). Before each exam, I will post a practice exam on Canvas. All exams need to be taken in class on the day of the exam or in the ASC with proper authorization. You can only retake an exam if you notify me ***PRIOR*** to the exam being given.

Tuesday, May 8th @ 10:45 AM – 12:45 PM

This is the only day the final will be offered. Make travel plans accordingly.

Homework

Online Homework: Each section will have an online homework assignment in Canvas under the module "***Online Homework***". Each assignment will be open for 3 full days during which time you will have unlimited attempts at each problem. It is critical that you do the homework and take it seriously. This is where much of your actual learning in this course takes place.

Written Homework: Each week I will post a written assignment on Canvas under the module "***Written Homework***". Assignments are due at the beginning of class the following Tuesday. I will drop your lowest written homework score.

Quizzes

There will be a quiz every Friday at the beginning of class. You will to given 5 – 10 minutes to complete the quiz from the time the quiz is handed out. If you are late you will have less time to do the quiz so please be on time! The quizzes will be on the material covered the week prior. I will drop your lowest quiz score.

Project

You will collect real data and perform a Linear Regression Hypothesis Test. Your paper must be written in the form of a scholarly journal.

Project details and rubric will be provided.

Grades

Your final grade will be determined as follows:

Online Homework:	25 %
Written Homework:	10 %
Quizzes:	10 %
Project:	15 %
Exams:	30 %
Final Exam:	10 %

The grade breakdown is as follows:

A	93 - 100%	C+	77 - 79%
A-	90 - 92%	C	70 - 76%
B+	87 - 89%	D	60 - 69%
B	83 - 86%	F	0 - 59%
B-	80 - 82%		

Mathematics Department Policy Regarding "Faculty Withdrawal" of Students after Census Day

It is the policy of the College of the Redwoods Math Department to exercise a "Faculty Withdrawal" for any student who has missed more than 15% of the class meeting time (prior to the drop deadline), due to the severely diminished likelihood of a successful outcome in the course. It is important to note that, if it is the student's intention to withdraw from the course, the responsibility remains with the student to ensure the proper paperwork has been filed – that is, students are not to assume the teacher will file the "Withdrawal" automatically.

Guidelines for Written Homework

1. I must be able to read your work. If I cannot read your writing, you will not get credit for that problem.

2. You must answer questions in complete, grammatically correct sentences when appropriate. More explanation is almost always better than less explanation.

3. Show your work – ***do not just turn in a list of answers***.

4. If you use more than one sheet of paper **YOU MUST STAPLE YOUR PAGES IN THE UPPER LEFT-HAND CORNER!**

5. **If you rip your pages out of a spiral notebook you must remove the frillies!!**

* This syllabus is subject to change. I will notify you in class & on Canvas should this become necessary.

Course Schedule: Math 15, Spring 2018

Week 1		
Tuesday – 1/16	1.1	Class Introduction The Scientific Method
Thursday – 1/18	1.2 1.3	Decisions, Decision The Language of Statistical Decision Making
Friday – 1/19	1.4	What's in the Bag?
Week 2		
Tuesday – 1/23	1.4	What's in the Bag?
Thursday – 1/25	2.2 2.3 2.4	Why Sample The Language of Sampling Good Data?
Friday – 1/26	2.5 – 2.8	Sampling Methods
Week 3		
Tuesday – 1/30		**Exam 1** **(Ch. 1, 2)**
Thursday – 2/01		**NO CLASS**
Friday – 2/02	4.2 4.3	Summarizing Variables Displaying Qualitative Variables
Week 4		
Tuesday – 2/06	4.4	Displaying Quantitative Variables
Thursday – 2/08	5.2 5.3	Measuring Center Measuring Spread
Friday – 2/09	5.4	Linear Transformations & Standardization

Week 5		
Tuesday – 2/13	13.2 13.3	Displaying a Linear Relationship Modeling a Linear Relationship
Thursday – 2/15	13.4 13.5 13.6	Residual Analysis Influential Points & Outliers Statistically Significant Relationship?
Friday – 2/16		Holiday
Week 6		
Tuesday – 2/20	13.7	The Correlation Coefficient
Thursday – 2/22	13.9	The Coefficient of Determination
Friday – 2/23		Exam 2 Review
Week 7		
Tuesday – 2/27		**Exam 2** **(Ch. 4, 5, 13)**
Thursday – 3/01	6.2 6.3	Why do we need to know Models? Modeling Continuous Variables
Friday – 3/02	6.3 6.4	Modeling Continuous Variables Modeling Discrete Variables
Week 8		
Tuesday – 3/06	7.5	Probability with Random Variables
Thursday – 3/08	7.5	Probability with Random Variables
Friday – 3/09	7.5	**NO CLASS**
Spring Break: 3/12 – 3/16		

Week 9		
Tuesday – 3/20	8.2	Sampling Distribution of Sample Proportions
Thursday – 3/22	8.3	Bias & Variability
Friday – 3/23	8.4	Sampling Distribution of Sample Means
Week 10		
Tuesday – 3/27		**Exam 3** **(Ch. 6, 7, 8)**
Thursday – 3/29	9.2 9.3	Population Proportions Hypothesis Testing w/ Proportions
Friday – 3/30	9.4	Confidence Interval Estimation of the Population Proportion
Week 11		
Tuesday – 4/03	11.5	Comparing Population Proportions
Thursday – 4/05	10.2 10.3	Hypothesis Testing w/ Means Confidence Interval Estimation of the Population Mean
Friday – 4/06	10.3 10.4	Confidence Interval Estimation of the Population Mean Confidence Intervals and Hypothesis Testing
Week 12		
Tuesday – 4/10	11.2 11.3	Paired vs. Independent Samples Paired Samples
Thursday – 4/12	11.4	Independent Samples
Friday – 4/13		Exam 4 Review **Exam 4: Take-home Exam** **(Ch. 9, 10, 11)** **Due Tuesday, April 17th**

Week 13		
Tuesday – 4/17	12.2 – 12.5	Analysis of Variance, Assumptions, the F-Distribution, & the F-Statistic
Thursday – 4/19	12.5	Performing a One-Way ANOVA Hypothesis Test
Friday – 4/20	12.5	Confidence Intervals w/ ANOVA
Week 14		
Tuesday – 4/24	14.2 14.3	Chi-Square Distribution & Test Statistic Goodness of Fit Test
Thursday – 4/26	14.4	Chi-Square Test of Homogeneity
Friday – 4/27	14.5	Chi-Square Test of Independence
Week 15		
Tuesday – 5/01		Exam 4 Review
Thursday – 5/03		**Exam 5** **(Ch. 12 & 14)**
Friday – 5/04		Final Exam Review
Finals Week		
Final Exam	**Tuesday, May 8th @ 10:45 AM – 12:45 PM** **This is the only day the final will be offered. Make travel plans accordingly.**	

* This schedule is subject to change. I will notify you in class & on Canvas should this become necessary.