Meet and Greet (:30)

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Larry Green, Lake Tahoe Community College, drlarrygreen@gmail.com (will arrive at the end)

Past ZTC Project (:35)

In 2018, our team of 15 faculty from 13 colleges created template courses from Intermediate Algebra to Multivariable Calculus.
https://docs.google.com/document/d/1OQQ9xeLFWVNKRLNV3S8ZP5rHz7qZuWRuU_BgwYi62Vg/edit

OER Textbooks for Statistics (:40)

Here is a short list of OER Statistics textbooks.

Illokwsky & Dean	**OpenStax Introductory Statistics, 2016**	https://openstax.org/details/introductory-statistics
Kate Kozak	**"Statistics Using Technology, 2nd 3d. 2015"**	https://libraryguides.nau.edu/cccoer
Diez, Barr, & Cetinkaya-Rundel	**"OpenIntro Statistics, 3rd ed. 2017"**	https://www.openintro.org/stat/textbook.php?stat_book=os https://www.openintro.org/stat/teachers.php http://www.opentextbookstore.com/
Pete Kaslik	**Foundations in Statistical Reasoning**	http://www.opentextbookstore.com/details.php?id=8
David Lane	**"Rice Virtual Lab in aka Hyperstat Online Statistics"**	"https://www.merlot.org/merlot/viewMaterial.htm?id=79148 https://www.merlot.org/merlot/materials.htm?keywords=David+lane&sort.property=relevance"

OER Technologies (:45)

GeoGebra Classic
Larry Green's Google Sheet

OER Online Homework System - MyOpenMath(MOM) (:50)

Short overview of the Statistics Template
MyOpenMath MOM tutorials
Integrating MOM into Canvas
Creating a MOM instructor account (https://www.myopenmath.com/newinstructor.php)

Preview of the Statistics Support Course (:10)

R.1: Decimals, fractions and percents

Students need to be able to . . .	**In order to . . .**
Rounding decimals	Calculate numerical summary statistics, test statistics, and confidence intervals
Converting between fractions, decimals, and percents	Calculate and interpret probabilities, calculate margin of error and confidence intervals, interpret confidence levels and Type I and Type II error probabilities
Comparing between fractions, decimals and percents	Interpret charts and tables, compare probabilities
Using fractions, decimals, and percents to describe charts	Interpret bar charts and pie charts

R.2: The Number Line

Students need to be able to . . .	**In order to . . .**
Plot points and intervals on the number line	Make and interpret dotplots
Find the distance between two points on the number line	Calculate deviations from the mean and calculate *z*-scores

Represent an inequality as an interval on the number line	Calculate probabilities for continuous random variables, understand and interpret confidence interval estimates
Order decimal numbers	Calculate medians and quartiles, and compare *P*-values to a significance level
Midpoint	mean, confidence interval

R.3. Operations on Numbers

Students need to be able to . . .	**In order to . . .**
Perform signed number arithmetic	Calculate residuals, *z*-scores, numerical summary statistics, test statistics, and confidence interval estimates
Order of operations	Evaluate statistical formulas by hand and with technology
Calculate the square root of a number (using technology)	Calculate standard deviation and standard error
Calculate powers of a number (using technology)	Calculate the variance and standard deviation of a sample and the value of a chi-square statistic
Understand order of operations in expressions and formulas	Calculate numerical summary statistics, test statistics, and confidence interval estimates
Use summation notation	Calculate an expected value, the sample mean and standard deviation, the correlation coefficient, the value of the chi-square statistic, and regression coefficients
Factorials, combination notation	Combination and Permutation
Area of Rectangle	Calculate probability associates with the uniform distribution

R.4: Sets

Students need to be able to . . .	**In order to . . .**
Understand Venn diagrams	Understand probability rules and calculations

Use set notation	Define sample spaces and events
Find the complement of a set	Define events and calculate their probabilities
Find the union and the intersection of two sets	Define events and calculate their probabilities

R.5: Expressions, Equations and Inequalities

Students need to be able to . . .	**In order to . . .**
Evaluate algebraic expressions (including square root)	Calculate numerical summary statistics, test statistics, confidence intervals, *z*-scores and regression coefficients
Solve a linear equation in one variable	Find percentiles for a normal distribution
Solve equations with roots	Confidence Interval of SD and variance?
Inequality Notation	Confidence Interval?
Select and use appropriate methods to solve the following types of equations: linear, fractional, radical	
Solve linear and fractional inequalities	
Apply concept of variables as representing quantities	
Apply concept of a function and interpreting functions as communicating relationships between variables	
Recognize difference between variables and parameters in general forms of linear models	

R.6: Graphing Points and Lines in Two Dimensions

Students need to be able to . . .	**In order to . . .**
Plot an ordered pair (x, y) in a rectangular coordinate system	Create scatterplots and residual plots
Understand slope as the change in y associated with a 1-unit change in x	Understand and interpret regression coefficients in a data context
Given the equation of a line, draw the graph	Graph the regression line

of the line	
Use the equation of a line to find the *y*-value associated with a given *x*-value	Use the regression line to make predictions
Find the vertical distance between a point and a line	Calculate residuals
Linear regression models and predictions with equations and graphs	
Interpret slope and y-intercept in linear regression	
Graph and find the equation of a line	
Reading graphs and extracting information from tables	
Graph as a set of solutions to an equation	
Sketch graph of a function using tables and transformations	
Determine domain and range of a given function	

ASCCC Regional Meeting – In Person

Developing the Skills for Success in Statistics with OER – Online Homework Systems, Videos and More

Friday, May 3 – Rio Hondo College - 9:30 am to 3:00 pm– Register Now
Saturday, May 4 – Solano Community College - 9:30 am to 3:00 pm – Register Now
Every mathematics department in the California Community College system is working to address student needs, especially in light of AB 705. This workshop will bring mathematics faculty that teach statistics together to share the approaches being employed to help students succeed in their statistics classes whether it be with a traditional prerequisite or with a corequisite support course. This interactive, hands-on workshop is a professional development opportunity for faculty to learn ways to find and work with available OER resources, including text-based material, videos, and the MyOpenMath online assignment system. The goal is to work as a mathematics community to provide students with a no-cost collection of resources that will lead them to success in mastering the course content and that can be accessed as references for future use.