

## Psychology

- Discipline specific statistics courses - research methods with basic stats
  - Don't always transfer
  - Have to retake at institution to which they transfer
- Content varies from institution to institution
  - Chemeketa (CCC) has a "research" test that must be passed at 70% or higher
  - Mean, median, mode, range, standard deviation, t-test
  - Read journal articles and discuss stats
  - General psych at CCC is two quarters, 4 credits each, chapter on history and research methods, added topic
  - Prerequisite Math 70 must be passed
  - AAOT requires Math 111
  - PSU teaches underlying assumptions but not calculations, depend on technology (e.g. normal distribution),
  - Rogue CC has no math prerequisite
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- Quite a lot of controversy around expectations of ability to do hand calculations
- Wayne Barber – what math do you need in introductory courses? Is it conceptual or computational? Mix?
  - Misuse of stats? Can this be eliminated by better math pathways?
- Read and interpret stats, not calculate, but understand
  - Charts, graphs, tables,
  - Interaction of variables – exponential functions vs. linear interactions, correlation, independent vs. dependent variables
  - Absolute value, application of distance from mean
  - Percentage, probability,
  - Compare numbers
  - Middle school math
- Geology
  - Graphing is critical! Starting from data not equations – appropriate representation form – basic intro course for non-majors
  - Rates of flow, averages
- Hybrid or online changes the nature of the class
  - This is a growing format
  - Only works well for self-motivated
- Applications – OIT linear algebra noted that Google uses linear algebra in Google Translate (king-man+women=queen, in Spanish)
- Pattern recognition is important in both math and psychology

### **Afternoon Conversation**

- Research methods courses do not typically transfer which makes it unattractive to students
- Could articulation agreements mandated by state? Should they be?
- Now up to each institution to determine transfer
- Statistics seems to be a critical need, but HAVE to transfer
- Work to minimize credits lost in transfer
- What about software? – SPSS, SAS, Excel, MySTAT, NVivo, etc.
- Math 243 – some inferential stats, Math 244 second term of stats – required at PSU for ???
- **Math Needs** – Absolute value, percentage, graphs, tables, and charts, probability, basic arithmetic, rates of change, predictions from data, modeling, ideally 111 and 243 to keep all pathways open, good course in how to read and interpret research, Venn diagrams,
- To prepare for grad school – more stats, very dependent on specialization and institutional requirements

### **Geology – Math**

- Calculus, differential equations, geophysics
- Meteorology – pressure, gradients, maps
- Depends very much on specialization
- Math 111 and statistics