

Learning Outcomes - A Process

Big Ideas:

(And the learning outcomes that will be re-written)

1. **SLO:** Through real world applications students will create, manipulate, and interpret mathematical models of relationships defined by either a constant rate of change or a constant relative rate of change.

Interpretation: Given real data and a real world situation, you will generate the appropriate linear or exponential model and use it to describe the behavior of the data as well as anticipate future behavior.

2. **SLO:** Students will recognize, apply, and interpret rule of 4 representations of key course elements.

Interpretation: You will develop a reference guide of multiple representations (graphic, symbolic, numerical/data, verbal/applied) of linear and exponential functions and their applications.

3. **SLO:** Students will develop skills and attitudes for effectively solving problems at an introductory algebra level.

Interpretation: You will be exposed to a variety of problem solving situations culminating in a portfolio of your accumulated work. Using your portfolio you will evaluate your progress as a problem solver.

Little Ideas:

Among the subtopics included in this course you can expect to develop a clear understanding of:

- Graphical, Numerical, and Symbolic manipulations of linear functions.
- The order of operations.
- Exponent rules.
- Solving systems of linear equations.
- Determining a best-fit line (curve) to roughly linear or exponential data.
- Solutions to applied problems in linear functions.
- How linear and exponential functions apply to sequences.
- Linear Programming.
- Conditions that make things behave linearly or exponentially.
- Solving power function equations and simple exponential equations (easy common base).