ECON 5370 – Take Home Quiz #1 (20 pts)

<u>Due</u>: Tuesday, February 13, 2018

<u>Directions</u>. The assignments must be typed and no longer than three double-spaced pages. Make sure tables and figures are numbered and appropriately formatted. You will be rewarded for clarity and conciseness. Appendices are allowed provided they are well-organized and referenced within the main three pages.

- Your assignment is to build an econometric model and an ARMA model to forecast Wyoming's unemployment rate. For the econometric model, choose no more than two explanatory variables and make sure to test for serial correlation. Present both OLS estimates with Newey-West standard errors and feasible GLS. Make sure to discuss your results and put them in the appropriate political and economic context.

- The choice of the estimated ARMA model needs to be defended using the ACF and PACF.

- Make a final recommendation on the preferred model – either the econometric or ARMA model. Defend your answer.

- Make sure the report includes a clear documentation of the data, data sources, variable definitions, and summary statistics. The goal is to make the results reproducible without too much effort.

- Finally, use both models to predict the unemployment rate for January 2019. Comment on the results.