

# ECON 4115/5115 Outline of Lecture Notes

## Chapter 2. Time Series Graphics

- Time series graphs are the best way to visualize the data and look for patterns.
- There are three types of patterns: trend, seasonality, and cycles.
- In R, the first thing to do is transform the data into a time series object.
- Following the textbook, we will create a “tsibble” object.
- The named “tsibble” object can be graphed using *autoplot()*.
- Examples of time series graphs:
  - Regular time series plot [*autoplot()*]
  - Seasonal subseries plot [*gg\_subseries()*]
  - Scatter plot [*ggplot()*]
  - Lag plot [*gg\_lag()*]
  - Correlogram or Plot of Autocorrelation Function [*ACF()*]
- Applications: Stock Market, Wyoming Economy, and Global Temperatures datasets