

TS Module 15 Forecasting basics

(The attached PDF file has better formatting.)

- Minimum mean squared error forecasting
- Deterministic Trends
- ARIMA forecasting: autoregressive processes

Read Section 9.1, "Minimum mean squared error," on page 191.

Read Section 9.2, "Deterministic Trends," on pages 191-193. Note that the forecasts are unbiased and the forecast error variance is constant (equation 9.2.4 on page 192).

Read Section 9.3, "ARIMA forecasting," on page 194-197, stopping before the MA(1) heading. Know equation 9.3.8 on page 194.

Know the variance for AR(1) forecasts: equation 9.3.16 on the top of page 196 and equation 9.3.17 on the bottom of page 197.

Forecasting is the objective of time series analysis. A final exam problem may combine the pieces of time series analysis. It may give you data to estimate the ARIMA process and ask for the variance of the one period or two periods ahead forecast. The discussion forum has practice problems to help you prepare.