Instructional Objectives for Roberts Chapter 6 –
Time-Domain Analysis of Continuous-Time Systems

6.2 The Convolution Integral

Define what is meant by the *impulse response* (h(t)) of a system.
Apply the properties of convolution to simplify convolution problems.
Calculate - the convolution integral given an x(t) and an h(t).
Calculate - the graphical result (shape only) of a convolution integral.
Determine the overall impulse response for series and parallel systems.
State the condition for a system to be BIBO stable given its impulse response.

6.3 Block Diagram Realization of Differential Equations

Draw the block diagram of a Direct Form I or Direct Form II realization of a system.
Given the Direct Form I or Direct Form II realization of a system, determine the associated differential equation.