EECS 210 Section 2 – Lecture Summaries
Lecture 21, Friday, February 23, 2001

• Energy Storage Devices
  ➢ Inductor, \( v = L \frac{di}{dt} \) (passive sign convention)
    ✓ Required \( v \) increases with \( L \) and with frequency
    ✓ Current must be continuous
    ✓ Inductors in series add
      ✓ Inductors in parallel look like \( L_{eq} = \frac{1}{\frac{1}{L_1} + \frac{1}{L_2} + \frac{1}{L_3} + ...} \)
  ➢ Inductors – short to dc, open as \( f \to \infty \)
  ➢ Capacitors – open to dc, short as \( f \to \infty \)
  ➢ Across inductors, voltage leads current by \( 90^0 \)
  ➢ Across capacitors, current leads voltage by \( 90^0 \)
  ➢ Practical inductors typically have in-line resistance
  ➢ Practical capacitors can be near ideal