

**Recitation 6 Notes**  
**14.01SC Principles of Microeconomics**

- I. Economies of Scale
  - a.  $Q = f(L,K)$
  
- II. Constant Returns to Scale
  - a.  $F(2L,2K) = 2F(L,K)$
  
- III. Increasing Returns to Scale
  - a.  $F(2L,2K) > 2F(L,K)$
  
- IV. Decreasing Returns to Scale
  - a.  $F(2L,2K) < 2F(L,K)$
  
- V. Economies of Scale in Production
  - a.  $C(2Q) < 2C(Q)$
  - b.  $C(2Q)/Q < 2C(Q)/Q$
  - c.  $C(2Q)/2Q < C(Q)/Q$
  - d. Average cost of producing more is less than average cost of producing less.
  
- VI. Diseconomies of Scale in Production
  - a.  $C(2Q) > 2C(Q) \rightarrow AC(Q)$  increases
  
- VII. Economies of Scope –firms that produce multiple goods cheaper should produce goods together rather than separately

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