1026-05-86　　　　　**Garth Isaak*** (`gisaak@lehigh.edu`), Department of Mathematics, Lehigh University, Bethlehem, PA 18015. *An Edge Count Criterion for Degree Sequences.*

Given a two edge colored complete graph and disjoint vertex sets, the sum of the red degrees in one part plus the sum of the blue degrees in the other is at least the number of edges between the parts. That this necessary condition for red/blue degrees is also sufficient is simply a restatement of degree sequence conditions for a simple graph. However, using this edge count perspective allows for another simple proof for degree sequences and a unified view with degree sequence conditions for digraphs, bigraphs etc. We also discuss potential generalizations to a sequence of k-tuples being the degree sequence of a k edge colored complete graph (i.e., degree constrained factorizations) and give conditions for such a sequence to be the degrees of some k edge colored tree. (Received February 15, 2007)