

1025-05-15

**Stephen G Hartke\*** ([hartke@math.uiuc.edu](mailto:hartke@math.uiuc.edu)), Department of Mathematics, University of Illinois, Urbana, IL 61801. *Graph classes characterized both by forbidden subgraphs and degree sequences.*

Given a set  $\mathcal{F}$  of graphs, a graph  $G$  is  $\mathcal{F}$ -free if  $G$  does not contain any member of  $\mathcal{F}$  as an induced subgraph. We say that  $\mathcal{F}$  is a degree-sequence-forcing set if, for each graph  $G$  in the class  $\mathcal{C}$  of  $\mathcal{F}$ -free graphs, every realization of the degree sequence of  $G$  is also in  $\mathcal{C}$ . We prove that for any  $k$  there are finitely many minimal degree-sequence-forcing sets with cardinality  $k$ . We also give a complete characterization of the degree-sequence-forcing sets  $\mathcal{F}$  when  $\mathcal{F}$  has cardinality at most two, and partial results when  $\mathcal{F}$  has cardinality three. (Received November 28, 2006)