1011-05-243 Heather Jordon* (hjordon@ilstu.edu), Illinois State University, and Dean Hoffman

(hoffmdg@mail.auburn.edu), Auburn University. Signed Graph Factors and Degree Sequences.

For a signed graph G and function $f: V(G) \to Z$, a signed f-factor of G is a spanning subgraph F such that $\operatorname{sdeg}_F(v) = f(v)$ for every vertex v of G, where $\operatorname{sdeg}(v)$ is the number of positive edges incident with v less the number of negative edges incident with v, with loops counting twice in either case. In this talk, for a given vertex-function f, we provide necessary and sufficient conditions for a signed graph G to have a signed f-factor. As a consequence of this result, an Erdős-Gallai-type result is given for a sequence of integers to be the degree sequence of a signed r-graph, the graph with at most r positive and r negative edges between a given pair of distinct vertices. (Received August 29, 2005)