1011-05-314   **Gargi Bhattacharyya*** (gbhattac@iastate.edu), 396 Carver, Ames, IA 50010, and **John Hegeman**, **Jeff Langford**, **Joohyung Kim** and **Sung Y. Song** (sysong@iastate.edu), 396 Carver, Ames, IA 50010. *Polygonal Designs: Existence and Construction.*

Polygonal designs form a special class of partially balanced incomplete block designs. We resolve the existence problem for polygonal designs with various parameter sets and present several construction methods with blocks of small size. (Received August 30, 2005)