Authors’ abstract: Given positive integers $k \leq m \leq n$, a graph $G$ of order $n$ is $(k, m)$-pancyclic if for any set of $k$ vertices of $G$ and any integer $r$ with $m \leq r \leq n$, there is a cycle of length $r$ containing the $k$ vertices. Minimum degree conditions and minimum sum of degree conditions of nonadjacent vertices that imply a graph is $(k, m)$-pancyclic are proved. If the additional property that the $k$ vertices must appear on the cycle in a specified order is required, then the graph is said to be $(k, m)$-pancyclic ordered. Minimum degree conditions and minimum sum of degree conditions for nonadjacent vertices that imply a graph is $(k, m)$-pancyclic ordered are also proved. Examples showing that these constraints are best possible are provided.

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