

**CSC 641 Network Science
Fall 2016**

Assignment 1: Review on Centrality Measures

Due: October 6, 2016: 6 PM (in-class)

In Module 3 - Centrality, we will be covering the following centrality measures for undirected graphs and directed graphs.

Undirected Graphs

Degree-based: Degree centrality, Eigenvector centrality

Shortest path-based: Betweenness centrality, Closeness centrality and Farness centrality

Hybrid: Local clustering coefficient based degree centrality

Directed Graphs

HITS and PageRank

Task: Your task in this assignment is to review the literature for centrality measures (other than the above measures covered in Module 3) and explain four such centrality measures explaining their purpose, algorithms, if any, to calculate them and also illustrate their calculation with an example graph for each.

At least one of the four centrality measures you review must be applicable for directed graphs.

Also, at least one of the four centrality measures you review must be applicable for undirected graphs.