```
% Load the Iris dataset
load fisheriris

% Perform PCA on the dataset
[coeff, score, ~, ~, explained] = pca(meas);

% Use only the first two principal components for clustering
reducedData = score(:,1:2);

% Perform k-means clustering (assuming 3 clusters for the Iris dataset)
k = 3;
[idx, C] = kmeans(reducedData, k);

% Plot the clustered data
gscatter(reducedData(:,1), reducedData(:,2), idx);
title('PCA-based Clustering of the Iris Dataset');
xlabel('First Principal Component');
ylabel('Second Principal Component');

% Optionally, plot the cluster centroids
hold on
plot(C(:,1), C(:,2), 'kx', 'MarkerSize', 15, 'LineWidth', 3)
hold off
```