

# Building Enrolment Students' Forecasting Models in Faculty of Commerce at IUG in Palestine - Comparative Study

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## Abstract

Accuracy is an important issue in forecasting. As many factors have effects on college enrollment, researchers tend to add more and more variables in enrollment forecasting models. Does a more complex model necessarily do a better job than a simpler one? This research will examine three enrollment forecasting methods (Regression, Autoregressive Integrated Moving Average (ARIMA), and Artificial Neural Networks (ANNs) models). Then applied these methods to three departments in Faculty of Commerce at the Islamic University of Gaza (IUG), namely, Accounting, Business Administration and Economic and Political sciences. The analytical procedure of the proposed models will be given. Both the classical and proposed forecasting models will developed. Number of enrolment students will be selected in the period 1980-2012. The three models will be compared using six different forecasting criteria: mean error (ME), mean absolute error (MAE), mean squared error (MSE), mean percent error (MPE), the root mean squared error (RMSE), and mean absolute percent error (MAPE). Issues in different forecasting approaches and criteria to choose a forecasting technique will be discussed in this research.

*Keywords:* Regression, Time Series Forecasting, ARIMA, Autoregressive, Neural Networks.