Form (H)
Short course description

Course title: Regression Analysis	Course number and code: STAT 332
Previous course requirement: STAT 328 + MATH 244	Language of the course: English
Course level: 5 / Year 3	Effective hours: 3(2+0+2)

Course description

Simple linear regression model - Multiple linear regression - Analysis of residuals and predictions – inference about the parameters - Stepwise regression - Some nonlinear regression models and data transformations - Student will use statistical computer packages such as R.

Course objectives

Understanding the linear and nonlinear regression models in bulk of the data to explanation of some of different phenomenon.
Understanding the methods for testing the validity of the regression model.
Understanding how to select the best methods to analysis data and using statistical packages as R.
Give the right interpretations of the results of the regression model
Preparing and writing the statistical reports.

Learning outcomes (understanding, knowledge, and intellectual and scientific skills)
After studying this course, the student is expected to be able to:

Understand and difference between the response and independent variables
Developing statistical inferences of the regression model
Understand, study and analysis problems that are arising in the different real life situations
Ability of using the statistical packages used for the calculations in the regression models, such as R.
Ability to construct the regression models
and Developing the communication skills through writing comments summarizing the findings and participatory interpersonal sharing of knowledge

Textbook adopted and supporting references

Title of the book	Author's name	Publisher's name	Date of publication
Applied Linear Regression Models, Fifth Edition,	Kutner, M., Nachtsheim, C.J. and Neter, J.	McGraw-Hill	2005

Applied regression Analysis	Draper, N.R. and Smith, H.	John Wiley and Sons	1998
Regression Analysis by Example, 5-th Edition	Chatterjee, S and Hadi A. S.,	John Wiley and Sons	2012
Applied Linear Regression, 3rd Edition	Weisberg S.	John Wiley and Sons	2002