

**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

