## **SFU** CHAPTER 5: HYPOTHESIS TESTING

Example

Let's use a real-life example to conduct some hypothesis testing. Consider trying to explain BUEC 333 final exam grades (out of 100) using term test grades (out of 100), assignment grades (out of 100) and tutorial grades (out of 100)

Sample: A previous year's BUEC333 class

Some summary statistics:

	EXAM	ASSIGNMENTS	TUTORIALS	TEST
Mean	62.53052	69.27208	90.75774	65.83019
Median	62.35294	74.40000	100.0000	65.00000
Maximum	95.88235	94.50000	100.0000	107.0000
Minimum	14.70588	0.000000	0.000000	14.00000
Std. Dev.	13.57901	17.07432	15.57787	18.08266
Observations	265	265	265	265

## **SFU** CHAPTER 5: HYPOTHESIS TESTING

### Regression output:

Dependent Variable: EXAM Method: Least Squares Date: 10/14/11 Time: 13:16 Sample: 1 265 Included observations: 265								
Variable	Coefficient	Std. Error	t-Statistic	Prob.				
ASSIGNMENTS	-0.029053	0.040932	-0.709776	0.4785				
TUTORIALS	0.022809	0.044567	0.511782	0.6092				
TEST	0.435593	0.038234	11.39270	0.0000				
C	33.79783	5.050905	6.691441	0.0000				
R-squared	0.334371	Mean dependent var		62.53052				
Adjusted R-squared	0.326720	S.D. dependent var		13.57901				
S.E. of regression	11.14207	Akaike info criterion		7.674313				
Sum squared resid	32402.04	Schwarz criterion		7.728346				
Log likelihood	-1012.846	F-statistic		43.70346				
Durbin-Watson stat	2.140137	Prob(F-statistic)		0.000000				

Dependent Variable: EXAM Method: Least Squares Date: 10/14/11 Time: 13:17 Sample: 1 265 Included observations: 265

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ASSIGNMENTS	-0.027099	0.041043	-0.660274	0.5097
TUTORIALS	0.025054	0.044697	0.560537	0.5756
TEST	0.437118	0.038316	11.40839	0.0000
STUDENTID	-7.19E-09	9.34E-09	-0.769827	0.4421
С	35.42682	5.479887	6.464881	0.0000
R-squared	0.335885	Mean dependent var		62.53052
Adjusted R-squared	0.325668	S.D. dependent var		13.57901
S.E. of regression	11.15078	Akaike info criterion		7.679583
Sum squared resid	32328.35	Schwarz criterion		7.747125
Log likelihood	-1012.545	F-statistic		32.87460
Durbin-Watson stat	2.124827	Prob(F-statistic)		0.000000

# SFU CHAPTER 5: HYPOTHESIS TESTING

Some plots:



How do we produce output using EViews?

Open workfile.

#### For summary statistics:

Select Quick  $\rightarrow$  Group Statistics  $\rightarrow$  Descriptive Statistics  $\rightarrow$  Common Sample In dialog box type: exam assignments tutorials test Click ok.

For regression output:

Select Quick  $\rightarrow$  Estimate Equation In Equation Specification dialog box type: exam assignments tutorials test c Click ok.

### For plots:

Select Quick  $\rightarrow$  Graph  $\rightarrow$  Scatter In Series List dialog box type: assignments exam