Дата: September 12, 2019

Syllabus
New School of Economics
Statistics 1, NSE 1053: (3 credit hours)
Spring Semester, 2020

Instructor: Dr. Kairat Mynbaev, Professor
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Pre-requisite: Statistics 1, NSE 1053, fall semester
Post-requisite: Econometrics

Course description
This course focuses on the theory and applications of statistical tools in business and economics. Its purpose is to give students a solid knowledge of the mathematical foundations of statistics and an introduction to the ideas used in econometrics. It is designed for 4 semesters and includes 16 chapters of the book Newbold et al. [1]. Topics for this semester include analysis of categorical data [1, Chapter 14] and sampling procedures [1, Chapter 17]. Some exercises will be done in Excel and Eviews.

Textbooks:
1. Newbold, P., W.L. Carlson and B. Thorne. Statistics for Business and Economics. London: Prentice-Hall, 2013. 8th edition.
2. Moser, C.A. and G. Kalton. Survey Methods in Social Investigation. Aldershot: Dartmouth, 1979
3. Mynbaev, K. T. Companion for "Statistics for Business and Economics" by Paul Newbold, William L. Carlson and Betty Thorne. 2010. http://ideas.repec.org/p/pra/mprapa/23069.html
4. Mynbaev, K.T. AP Stats and Business Stats. Lulu.com, 2015.

Planned Schedule:

Week	Classes			
	Topic	Lecture	Practice	Textbook
1	Analysis of Categorical Data. Goodness-of-Fit Tests: Specified Probabilities	2	1	[1] Chapter 14
2	Goodness-of-Fit Tests: Population Parameters Unknown	2	1	[1] Chapter 14
3	A Test for the Poisson Distribution. A Test for the Normal Distribution	2	1	[1] Chapter 14
4	Contingency Tables. Nonparametric Tests for Paired or Matched Samples	2	1	[1] Chapter 14

5	Sign Test for Paired or Matched Samples. Normal Approximation to the Sign Test			[1] Chapter 14
6	Wilcoxon Signed Rank Test for Paired or Matched Samples. Normal Approximation to the Wilcoxon Signed Rank Test	2	1	[1] Chapter 14
7	Nonparametric Tests for Independent Random Samples. Mann-Whitney U Test	2	1	[1] Chapter 14
8	**Midterm**			
9	Spearman Rank Correlation			[1] Chapter 14
10	A Nonparametric Test for Randomness. Runs Test: Small Sample Size			[1] Chapter 14
11	Runs Test: Large Sample Size			[1] Chapter 14
12	Additional Topics in Sampling. Stratified Sampling. Analysis of Results from Stratified Random Sampling	2	1	[1] Chapter 17
13	Allocation of Sample Effort Among Strata. Determining Sample Sizes for Stratified Random Sampling with Specified Degree of Precision	2	1	[1] Chapter 17
14	Other Sampling Methods. Cluster Sampling	2	1	[1] Chapter 17
15	**Final exam**	2	1	

Evaluation criteria:

Attestation 1 (assignments and quizzes)	30%
Mid-term exam (Attestation 2)	30%
Final exam (Attestation 3)	40%
Total points	100.00%

Midterm exam is a comprehensive exam based on the material covered during first seven weeks of the semester. Duration of the exam – 2 hours.

Final exam is a comprehensive exam based on the material covered during the whole semester. Duration of the exam – 3 hours. The final exam cannot be resit.

Grading policy

Letter grade	Number based grade	Criterion
A	**95 – 100**	
A -	**90 – 94**	
B +	**85 – 89**	
B	**80 – 84**	

B -	75 – 79	
C +	70 – 74	
C	65 – 69	
C -	60 – 64	
D +	55 – 59	
D	50 – 54	
F	0 – 49	

Attendance policy: Students who missed more than 20% of classes without a valid reason will automatically fail the course.

Academic honesty:
No book or mobile phones may be taken into the room during the exam, but the use of calculators is permitted. The final exam covers the whole course. There are no retakes or make-up exams.

If you miss a written or oral assignment or an exam for a valid reason you should notify the teacher in advance.

Cheating is punished by an unconditional "F".

Corruption in any form is inadmissible. An organizer of such actions (be it the teacher, students or third parties on their behalf) will bear full responsibility in accordance with the laws of the Republic of Kazakhstan.