LITHUANIAN SPORTS UNIVERSITY

STUDY MODULE PROGRAMME (SMP)

Module Code	S	274	M	047	Accredited until				Renewal date		
	Branch of Science		Progr.	Registr. №.							

Entitlement

Research Methods and Statistics

Prerequisites

Research methodology module for bachelor studies, bachelor studies

Course (module) Learning Outcomes

№.	Learning Outcomes	Teaching / Learning Methods	Assessment Methods
1	Independently develop personal knowledge and capabilities, independently learn	Formal lecture, Scientific paper analysis	Individual work, Problem-solving task, Scientific paper (text) analysis
2	To know and understand cognition of social sciences phenomenon.	Discussion, Formal lecture	Case analysis (study), Scientific paper (text) analysis
3	On the basis of fundamental and applied scientific knowledge construct research design.	Case analysis (Case study), Discussion	Group (team) project, Project report, Scientific paper (text) analysis
4	Understand and apply different methods of statistical analysis	Exercise classes, Formal lecture	Literature analysis, Reporting for practice work
5	Know and understand requirement for scientific publication.	Case analysis (Case study), Reflection on action	Background reading

Main aim

On the basis of fundamental and applied scientific knowledge to provide students with skills and analyze, critically assess the social reality of the phenomena, developing the skills needed for research activities, to develop practical skills to plan studies, collect data, analyze them, and to provide scientific conclusions

Summary

The module covers topics related to the modern concept of science and the knowledge of the complexity of social reality. Scientific problem and hypotheses. Research validity and reliability issues. Sample and sampling procedures. Data collection and statistical analyses methods in social sciences. Scientific article preparation. Research ethics issues.

Level of module

Level of programme		Subject group (under the regulation of the area)	Subject level
Cycle	Type		
Second	Master	Bendrojo universitetinio lavinimo	Deepening

Group under financial classification

Syllabus

№.	Sections and themes	Responsible lecturer
1.	Features of modern science. Cognition of social phenomenon. Relation between social and biomedical sciences	33 prof. dr. Saulius Šukys
2.	Searching for research problem and research problem fomulation.	33 prof. dr. Saulius Šukys
3.	Methodology of applying research methods. Validity and reliability.	33 prof. dr. Saulius Šukys
4.	Research sample and sampling.	33 prof. dr. Saulius Šukys
5.	Qualitative and quantitative research methods and data analyses	33 prof. dr. Saulius Šukys
6.	Introduction to SPSS. Research matrix. Scales of data, coding. Data arrangement and transforming	345 prof. habil.dr. Kazimieras Pukėnas (negeras tab)
7.	Data arrangement and transforming	345 prof. habil.dr. Kazimieras

№.	Sections and themes	Responsible lecturer
		Pukėnas (negeras tab)
8.	SPSS possibilities for data presentation	345 prof. habil.dr. Kazimieras Pukėnas (negeras tab)
9.	Statistical hypotheis testing. Parametric and non-parametric criterions	345 prof. habil.dr. Kazimieras Pukėnas (negeras tab)
10.	Crosstabulation. Analysis of survey research.	345 prof. habil.dr. Kazimieras Pukėnas (negeras tab)
11.	Questions reliability. Criterion of compatibility.	345 prof. habil.dr. Kazimieras Pukėnas (negeras tab)
12.	Correlation coefficient.	345 prof. habil.dr. Kazimieras Pukėnas (negeras tab)
13.	Factor analysis.	345 prof. habil.dr. Kazimieras Pukėnas (negeras tab)
14.	Regression. binary logistic regression, rank regression.	345 prof. habil.dr. Kazimieras Pukėnas (negeras tab)
15.	Analysis of variance.	345 prof. habil.dr. Kazimieras Pukėnas (negeras tab)
16.	Cluster analysis.	345 prof. habil.dr. Kazimieras Pukėnas (negeras tab)
17.	Decision trees. Predictions with SPSS.	345 prof. habil.dr. Kazimieras Pukėnas (negeras tab)
18.	Scientific publication.	33 prof. dr. Saulius Šukys

Evaluation procedure of knowledge and abilities:
Ten grade criterion scale and summative evaluation system are applied. The semester's individual work tasks are evaluated by grades; the final grade is given during the examination session while multiplying particular grades by the lever coefficient and summing up the products.

References

№.	Title
1.	Bhattacherjee, A. (2012). Social science research: Principles, methods, and practices. Prieiga internetu: http://scholarcom
2.	Cohen, L., Manion, L., & Morrison, K. (2009). Research methods in education (6 ed.). London: Routledge.
3.	Carlson, M., & Morrison, R. (2009). Study design, precision, and validity in observational studies. Journal of Palliative M
4.	Creswell, J.W. (2016). 30 Essential skills for the qualitative researcher. Prieiga per internetą: study.sagepub.com/30skills
5.	Dishman, R., Heath, G., Washburn, R. (2012). Physical activity epidemiology, 2nd edition Champaign: Human Kinetics.
6.	Etchegaray, J.M., Wayne, J.M.E., & Fischer, G. (2010). Understanding evidence-based research methods: reliability and Health Environments Research & Design Journal, 4(1), 131-135. Prieiga internetu: https://www.researchgate.net/publication/49687414_Understanding_EvidenceBased_Research_Methods_Reliability_and
7.	Fischer, A., Tobi, H., & Ronteltap, A. (2011). When Natural met Social: A Review of Collaboration between the Natural Reviews, 36 (4), 341-358. Prieiga internetu: https://www4.uwm.edu/c21/pdfs/transdisciplinary/presentation2013/fischer-
8.	Garson, G.D. (2012). GLM Repeated Measures. Prieiga internetu: http://faculty.chass.ncsu.edu/garson/PA765/glmrepeat
9.	Garson, G.D. (2012). Univariate GLM, ANOVA, and ANCOV. Ahttp://faculty.chass.ncsu.edu/garson/PA765/anova.htm
10.	Holt, A. (2010). Using the telephone for narrative interviewing: a research note. Qualitative Research, 10(1), 113-121. Pr https://www.researchgate.net/publication/240709646_Using_the_telephone_for_narrative_interviewing_A_rese arch_no
11.	Israel, M., & Hay, I. (2009). Research ethics for social scientists. London: Sage Publishing
12.	Smith, B., & Caddick, N. (2012). Qualitative methods in sport: a concise overview for guiding social scientific sport rese Science, 1(1), 60-73.
13.	Sparkes, A.C., Smith, B. (2014). Qualitative research methods in sport, exercise and health. London: Routledge

№	Title
14.	Sparkes, A.C. (2015). Developing mixed methods in sport and exercise psychology: critical reflections on five points of 16, 49-59.
15.	Tourangeau, R., Conrad, F.G., Couper, M.P., & Ye, C. (2014). The effects of providing examples in survey questions. Pu
16.	Thomas, J.R., Nelson, J.K., & Silverman, S.J. (2015). Research methods in physical activity (7th edition). Human Kineti
17.	Veal, A.J., & Darcy, S. (2014). Research methods in sport studies and sport management: a practical guide. Oxon: routle

Additional literature

№	Title
1.	Bourne, P.E., Barbour, V. (2011). Ten simple rules for building and maintaining a scientific reputation. PLOS computational biology, 7 (6), 1-2. http://www.ploscompbiol.org/article/info%3Adoi%2F10.137
2.	Lawrence et al., (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. Adm Policy Ment Health, 42(5), 533–544.
3.	O'Donoghue, P. (2010). Research methods for sports performance analysis. New York: Routledge. Prieiga internetu: https://www.researchgate.net/file.PostFileLoader.html?id...assetKey...
4.	Baxter, P., Jack, S. (2008). Qualitative case study methodology: study design and implementation for novice researchers. The Qualitative Report, 13(4), 544-559.
5.	Statistical Associates Publishers, http://www.statisticalassociates.com/
6.	Isaacs, A.N. (2014). An overview of qualitative research methodology for public health researchers. Int J Med Public Health, 4, 318-323.

Coordinating lecturer

Position	Degree, surname, name	Schedule №.
Professor	Prof. Dr. Saulius Šukys	33

Subdivision

Entitlement	Code
a	1006

Study module teaching form №. 1

Semester		Mode of studies	Structure				Total hours	Credits
			Theory	Seminars	Lab Works	Ind. work		
A	S	D	9	17	0	234	260	10

Languages of instruction:

Lithuanian	L	English	E	Russian	R	French	F	German	G	Other	Oth.

Plan of in-class hours

№. of Themes	Academic hours			№. of Themes	Academic hours		
	Theory	Seminars	Lab Works		Theory	Seminars	Lab Works
1.	1	0	0	10.	0	1	0
2.	1	1	0	11.	0	1	0
3.	2	2	0	12.	0	1	0
4.	1	2	0	13.	1	1	0
5.	1	1	0	14.	0	1	0
6.	0	1	0	15.	0	1	0
7.	0	1	0	16.	0	1	0
8.	0	1	0	17.	0	1	0
9.	1	0	0	18.	1	0	0
				Total:	9	17	0

Schedule of individual work tasks and their influence on final grade

	№. of syllabus	Total hours	Influence on grade, %	Week of presentment of task (*) and reporting (o)																
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17-20
Individual Homework	2-5	22	10			*		0												
Group (team) project	2-5	22	10				*		0											
Project report	2-6	35	20						*			0								
Control work	11,13	25	14								*						0			
Control work	9,10	25	12								*						0			
Control work	14	25	14								*						0			
Exam	1-18	80	20								*									0
Total:	-	234	100																	

Study module teaching form №. 2

Semester		Mode of studies	Structure				Total hours	Credits
			Theory	Seminars	Lab Works	Ind. work		
A	S	D	9	17	0	234	260	10

Languages of instruction:

Lithuanian	L	English	E	Russian	R	French	F	German	G	Other	Oth.

Plan of in-class hours

№. of Themes	Academic hours			№. of Themes	Academic hours		
	Theory	Seminars	Lab Works		Theory	Seminars	Lab Works
				Total:	0	0	0

Schedule of individual work tasks and their influence on final grade

	№. of syllabus	Total hours	Influence on grade, %	Week of presentment of task (*) and reporting (o)																
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17-20
Total:	-	0	0																	