COURSE OUTLINE

(1) GENERAL

SCHOOL	Social sciences		
ACADEMIC UNIT	Department of Sociology		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE	640	**SEMESTER**	Z
COURSE TITLE	Contemporary Research Tools in the Social Sciences		

INDEPENDENT TEACHING ACTIVITIES *if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits*	WEEKLY TEACHING HOURS	CREDITS
	3	6
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).		

COURSE TYPE *general background, special background, specialised general knowledge, skills development*	special background, specialised general knowledge, skills development
PREREQUISITE COURSES:	Overall, there are no prerequisites. However, knowledge of statistics will help to understand better n the use of the tools
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	https://www.soc.aegean.gr/ext-files/pm/pps/2020-640-en.pdf

(2) LEARNING OUTCOMES

Learning outcomes *The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.* *Consult Appendix A* • *Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area* • *Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B* • *Guidelines for writing Learning Outcomes*
The course aims to introduce students to modern research tools in the social sciences, specifically quantitative and qualitative research, as well as mixed methods of conducting social research. Regarding the tool use for quantitative research, the aim is to learn and apply methods and techniques of statistics with free packages such as R. Furthermore; they will amplify their skills in quantitative research design. In the case of qualitative research, emphasis is placed on using freely accessible IT tools such as RQDA so that students learn to design, conduct and analyse the results of qualitative research with the fluency, speed and accuracy provided by proper IT tools. **Learning objectives** **1.** Familiarity with quantitative research methods 2. Familiarity with modern tools of quantitative and qualitative techniques 3. Understanding quantitative and qualitative methods depending on the research questions.

4. Using and learning the R statistical package

5. Using and learning the RQDA package

Learning results

At the end of this course, the student will be able to:

1. Understands the concept of quantitative research in social sciences

2. Use R and RQDA

3. Works effectively in teams.

4. Develop study and research skills

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and information, with the use of the necessary technology	*Project planning and management*
Adapting to new situations	*Respect for difference and multiculturalism*
Decision-making	*Respect for the natural environment*
Working independently	*Showing social, professional and ethical responsibility and sensitivity to gender issues*
Team work	*Criticism and self-criticism*
Working in an international environment	*Production of free, creative and inductive thinking*
Working in an interdisciplinary environment	*……*
Production of new research ideas	*Others…*
	…….

Search for, analysis and synthesis of data and information, with the use of the necessary technology

Adapting to new situations

Decision-making

Working independently

Team work

Working in an international environment

Working in an interdisciplinary environment

(3) SYLLABUS

1^n & 2^n Lecture	Introduction

1. Introduction / Course Presentation
2. Method of assessment/scoring
3. How to install R and Rstudio
4. Familiarity with the work environment
5. Presentation of Basic functions
6. Applications / Examples

3^n Lecture	Introduction to R

1. Data Import/Export
2. Types of Data
3. Data Structures
4. Data processing ("aggregation" & cleaning)
5. Applications / Examples

4^n Lecture	Quantitative analysis- Descriptive statistics

1. Revision
2. Central tendency measures
3. Spread measures
4. Kurtosis and skewness
5. Bars / histograms/ pies
6. Applications / Examples

5ⁿ Lecture	Quantitative analysis and inferential statistics

1. Revision of basic inferential statistics
2. Hypothesis teststing Type I
3. Hypothesis teststing Type II
4. ANOVA / x2
5. Applications / Examples

6ⁿ Lecture	Correlation and linear regression

1. Revision
2. Correlation coefficient
3. Linear regression
4. Applications / Examples

7η Lecture	Demography with R

1. Ratios, Percentages, Probabilities
2. Structural Indicators
3. Fertility Analysis
4. Applications / Examples

8ⁿ Lecture	Demography with R

1. Mortality Analysis
2. Survival Tables
3. Applications
4. Applications / Examples

9ⁿ Lecture	Revision

10ⁿ Lecture	Quantitative analysis with RQDA

1. Introduction
2. RQDA
3. Text Analysis I
4. Applications / Examples

11ⁿ Lecture	Quantitative analysis with RQDA

1. Text Analysis II
2. Network
3. Applications / Examples

12ⁿ Lecture	Mixed methods

1. Complementarity in mixed methods
2. Applications / Examples

13ⁿ Lecture	Revision

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY *Face-to-face, Distance learning, etc.*	Face-to-face lectures and discussions. Active participation in the course and implementation of participatory teaching and learning
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY *Use of ICT in teaching, laboratory education, communication with students*	Statistical software (R, RQDA) will be used. The university's online platform will be used to communicate with students, provide educational material, and provide student feedback. Students will become familiar with online platforms for conducting questionnaire surveys. At the same time, the teacher will use electronic platforms to conduct polls during the course to achieve specific learning sub-objectives.

TEACHING METHODS *The manner and methods of teaching are described in detail.* *Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.* *The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS*	Activity	Semester workload
	Lectures	39
	Applications from the teacher / interactive teaching	13
	Applications by the students in the classroom under the guidance of the teacher	25
	Assignment	25
	Independent study	78
	Course total	180 hours (6 ECTS)

STUDENT PERFORMANCE EVALUATION *Description of the evaluation procedure* *Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other* *Specifically-defined evaluation criteria are given, and if and where they are accessible to students.*	**Evaluation language: Greek** **Evaluation** 1. Attendance and participation in lectures (10%) 2. Assignment (50%) 3. Written exam at the end of the semester (40%). The exams will be 30 multiple-choice questions. Students with demonstrated learning difficulties are provided with the support provided by legislation, academic practice and the nature of the course. Personal support will be provided to students on course issues by appointment or during office hours. General comments, grades and discussion about improving assignments. General feedback will be given for all assignments orally in the class and in written form separately for each assignment.

(5) ATTACHED BIBLIOGRAPHY

Textbooks
1. Ρούσος, Π. και Τσαούσης Γ. 2020.Στατιστική εφαρμοσμένη στις κοινωνικές επιστήμες με τη χρήση του SPSS και του R. Gutenberg, Αθήνα
2. Witte, R.S and Witte, J.S. 2019. Στατιστική: Ανάλυση δεδομένων με χρήση της R. Επιμέλεια, Ανδρουλάκης Γ. και Κουνετάς Κ., ΚΡΙΤΙΚΗ, Αθήνα

Suggested bibliography:

1. Wickham, H., Grolemund, G. 2017. R for Data Science: Import, Tidy, Transform, Visualise, and Model Data (1st. ed.). O'Reilly Media, Inc.

2. Chandra, Y., Shang, L., 2019. Qualitative Research Using R: A Systematic Approach. Springer Singapore, Singapore.https://doi.org/10.1007/978-981-13-3170-1

3. Ιωσηφίδης Θ., 2017. Ποιοτικές Μέθοδοι Έρευνας και Επιστημολογία των Κοινωνικών Επιστημών, Εκδόσεις Τζιόλας, Αθήνα.

4. Βερύκιος, Β., Καγκλής, Β., Σταυρόπουλος, Η., 2015. Η επιστήμη των δεδομένων μέσα από τη γλώσσα R. [ηλεκτρ. βιβλ.] Αθήνα: Σύνδεσμος Ελληνικών Ακαδημαϊκών Βιβλιοθηκών. Διαθέσιμο στο: http://hdl.handle.net/11419/2965