COURSE OUTLINE

1. GENERAL

SCHOOL	**Social Sciences**		
DEPARTMENT	**Department of Sociology**		
LEVEL OF STUDIES	**Undergraduate**		
COURSE CODE	ΠΛΗΚ250	**SEMESTER**	5th
COURSE TITLE	**Computer applications in social research**		

TEACHING ACTIVITIES *If the ECTS Credits are distributed in distinct parts of the course e.g. lectures, labs etc. If the ECTS Credits are awarded to the whole course, then please indicate the teaching hours per week and the corresponding ECTS Credits.*	**TEACHING HOURS PER WEEK**	**ECTS CREDITS**
	3	5
Please, add lines if necessary. Teaching methods and organization of the course are described in section 4.		

COURSE TYPE *Background, General Knowledge, Scientific Area, Skill Development*	**Specialized general**
PREREQUISITES:	**No**
TEACHING & EXAMINATION LANGUAGE:	**Greek**
COURSE OFFERED TO ERASMUS STUDENTS:	**No**
COURSE URL:	

2. LEARNING OUTCOMES

Learning Outcomes
Please describe the learning outcomes of the course: Knowledge, skills and abilities acquired after the successful completion of the course.

After the successful completion of the course, students are expected to have acquired knowledge and skills such as:

- To have gotten to know the computer and its subsystems as a tool and means of producing a research project.
- To gain a clearer picture of today's interconnected world and the mechanism by which the Internet works.
- Be informed about the ways search engines present the results of a search on the Internet.
- To be able to reflect on issues of collaboration – use of cloud services and data storage.
- Be informed on basic elements of the GDPR.
- Have acquired knowledge of image - sound - animation - text and binary data types.
- Have knowledge of open source software or freeware applications for the effective use of the above types of data in terms of their creation - processing - archiving in Social research.
- Be able to use an office suite of open source applications for task creation, simple statistical tasks and data preparation and presentation of Social Research results.

General Skills

Name the desirable general skills upon successful completion of the module

Search, analysis and synthesis of data and information,	*Project design and management*
ICT Use	*Equity and Inclusion*
Adaptation to new situations	*Respect for the natural environment*
Decision making	*Sustainability*
Autonomous work	*Demonstration of social, professional and moral responsibility*
Teamwork	*and sensitivity to gender issues*
Working in an international environment	*Critical thinking*
Working in an interdisciplinary environment	*Promoting free, creative and inductive reasoning*
Production of new research ideas	

- Search for, analysis and synthesis of data and information, with the use of the necessary technology
- Autonomous work
- Decision-making
- Team work
- Promoting free, creative and inductive reasoning
- Project design and management

3. COURSE CONTENT

In the course, familiarization with the use of a computer and related applications will be introduced.
The modules of the course tentatively include the following topics, tools and services:

1. Introduction to Computer Science
    a. Information as an entity
    b. Computer
        i. brief historical review and development
        ii. hardware - software
        iii. operating system and file systems
        iv. devices and peripherals
    c. data storage and file system
        i. storage units
        ii. information and file sizes
        iii. security of stored data
2. Interconnection of computers - networks
    a. Brief history of the Internet
    b. Networks - wired-wireless
    c. Domain Naming System
    d. The WWW browser
    e. Web search – heuristics and algorithms
    f. Protocols-Network Services
        i. email
        ii. social networks
        iii. social information systems
        iv. cloud services
    g. Internet security
    h. VPN
3. Data compression
    a. lossy – non-lossy
    b. numeric data – lossless compression (zip, 7zip, tar …..)
    c. image data
        i. Bitmap – vector images
        ii. dpi - color depth
        iii. sizes
        iv. metadata-exif-IPTC-XMP

v. lossless image compression
vi. producing image compression
vii. image file types

d. animation data
i. sizes
ii. lossless animation compression – codecs
iii. coding - video compression - codecs

e. audio data
i. sizes
ii. lossless audio compression – codecs
iii. coding - audio compression - codecs

4. Use of multimedia using open source software
a. Notices on the processing of sensitive personal data
i. GDPR Basics
b. Image management – editing
i. Image-text scanning
ii. image organization with IPTC - Tags – XnView program
iii. Basic Image Editing with XnView
iv. Basic Image Editing with GIMP
v. optical character recognition - OCR
c. Audio management – editing
i. Features and operation of dictation devices
ii. Good practices in audio recording
iii. Audio editing with Audacity – VLC
d. Video management – editing
i. Features and operation of video recording devices
ii. Good practices in video recording
iii. AviDemux

5. Using office applications in social research.
a. Using a text editor making use of structured text and reports.
b. Use a spreadsheet for simple statistical tasks, format and prepare data, import data from csv, fixed-width formats, and create graphs.
c. Presentation of results in a presentation program.

4. LEARNING & TEACHING METHODS - EVALUATION

TEACHING METHOD *Face to face, Distance learning, etc.*	**Face-to-face teaching, group exercises using computers in a computer lab.**
USE OF INFORMATION & COMMUNICATIONS TECHNOLOGY (ICT) *Use of ICT in Teaching, in Laboratory Education, in Communication with students*	**Use of presentations, the internet, and the Moodle asynchronous learning platform**

TEACHING ORGANIZATION

The ways and methods of teaching are described in detail.
Lectures, Seminars, Laboratory Exercise, Field Exercise, Bibliographic research & analysis, Tutoring, Internship (Placement), Clinical Exercise, Art Workshop, Interactive learning, Study visits, Study / creation, project, creation, project. Etc.

The supervised and unsupervised workload per activity is indicated here, so that total workload per semester complies to ECTS standards.

Activity	*Workload/semester*
Lectures	**39**
Exercises	**13**
Study	**30**
Study of material in the internet	**43**
Course total	**125**

STUDENT EVALUATION *Description of the evaluation process* *Assessment Language, Assessment Methods, Formative or Concluding, Multiple Choice Test, Short Answer Questions, Essay Development Questions, Problem Solving, Written Assignment, Essay / Report, Oral Exam, Presentation in audience, Laboratory Report, Clinical examination of a patient, Artistic interpretation, Other/Others* *Please indicate all relevant information about the course assessment and how students are informed*	The assessment is conducted through two progress tests during the semester and a final exam at the end of the semester, along with the completion of laboratory exercises on the Moodle e-learning system. Students will be informed about the exact evaluation criteria through the course outline, which they will receive at the beginning of the semester. The two progress tests account for 30% of the total grade (15% + 15%), while the final exam accounts for 70%.

5. SUGGESTED BIBLIOGRAPHY

1. Teacher notes
2. History of computing hardware, 2024. . Wikipedia.
3. Internet, 2024. . Wikipedia.
4. Digital Audio Fundamentals - Audacity Manual [WWW Document], n.d. URL https://manual.audacityteam.org/man/digital_audio.html (accessed 4.30.20).
5. Αρχή Προστασίας Δεδομένων Προσωπικού Χαρακτήρα [WWW Document], n.d. URL https://www.dpa.gr/ (accessed 4.30.20).
6. Digital video, 2020. . Wikipedia.
7. Data compression, 2020. . Wikipedia.
8. English documentation | LibreOffice Documentation - Your documentation for LibreOffice [WWW Document], n.d. URL https://documentation.libreoffice.org/en/english-documentation/ (accessed 4.30.20).