

Modules offered in English

The Department of Archival, Library & Information Studies (ALIS) offers the following modules (courses) relevant to Information Science for the Erasmus incoming students:

	Course Code	Course Title	ECTS	Semester	
				Winter	Spring
1	ALIS-ER-01	Introduction to Archival, Library & Information Studies	6		X
2	ALIS-ER-02	Metadata	6	X	
3	ALIS-ER-04	History of Books and Libraries	6	X	
4	ALIS-ER-05	History and Philosophy of Science	6		X
5	ALIS-ER-08	Scholarly Communication	6	X	
6	ALIS-ER-10	Digital Museums	6	X	
7	ALIS-ER-11	Health Information and Libraries	6		X
8	ALIS-ER-12	History of Mediterranean Civilizations	6		X
9	ALIS-ER-13	Cognitive Science	6	X	
10	ALIS-ER-14	Development of Academic and Professional Skills	6		X

All are offered on demand, in English and at the BA Level, and have 6 ECTSs each.

Incoming students may also choose 1 or 2 courses offered by other Departments, after consultation with the Erasmus office of UNIWA (erasmus_incomingstudents@uniwa.gr).

Erasmus ALIS Course Descriptions – Learning Outcomes

Introduction to Archival, Library & Information Studies (code ALIS-ER-01)

Assistant Professor Angeliki Antoniou angelant@uniwa.gr

The course provides instruction to the disciplines of Archival Library and Information Studies, allowing students to understand the different fields involved in the organization and management of cultural institutions, the management of knowledge and the role of cultural organizations and information systems in societies. In addition, the course aims at increasing students 21st century skills and provide the opportunities to work with presentation, collaboration and creativity skills. The course is a way to get acquainted with cutting edge research in the field and gives the opportunity for horizontal exploration of the fields involved. Students will work on a course project that will allow them to apply knowledge and creativity.

Metadata (code: ALIS-ER-02)

Assistant Prof. Artemis Chaleplioglou artemischal@uniwa.gr

Prof. Daphne Kyriaki-Manessi dkmanessi@uniwa.gr

The course focuses on providing metadata concepts, principles and applications in different domains. It offers the conceptual and practical knowledge needed for understanding the anatomy of metadata, their structure and their building blocks along with their use and wide application in digital libraries.

Existing metadata standards (such as DC, CIDOC CRM, MODS, EAD, etc) are used as examples and students are required to practice. The development of application profiles based on metadata schemas for specific information needs is also an integral part of the course.

Furthermore, Metadata services are also viewed within the framework of digital libraries.

At the end of the course students will be able to:

- Select the most suitable metadata schema and use it for the description of any digital resource in a digital library environment.
- Develop an application profile
- Understand the notions of interoperability and open data

History of Books and Libraries (code: ALIS-ER-04)

Ass. Prof. Yannis Stoyannidis ystoyannidis@uniwa.gr

This is mainly a course about the history of books and libraries. Students are introduced to the making of documents and books, the building and operation of libraries. Along with these two main concepts students will have the opportunity to hear how the history of reading and readership changed over centuries.

Key concepts introduced include:

- Making material for scripts. From the Ancient to the Medieval world
- Codex becomes a popular medium
- The book as art
- Libraries and architecture (classical times, medieval world, national libraries)
- The readership along centuries. A social history
- The revolution of Printing and the profession of printer
- Popular and forbidden books

Students will be able to understand and discuss the main ideas concerning the history of books and libraries. This course includes perspectives ranging from social history to material history. In the end of the course students will be asked to participate in oral or written exams.

History and Philosophy of Science (code: ALIS-ER-05)

Prof. Markos Dendrinos mdendr@uniwa.gr

During this course, the following subject areas are presented and discussed:

- History of science: The emergence of science in the form of philosophical assertions (Presocratic philosophers, Pythagorean mathematics and physics of harmonics, Timaeus of Plato). The emergence of mathematics in Mesopotamia, Egypt and Greece. Ancient astronomy. Finding the date of Latin and Orthodox Easter. Logical deduction and syllogisms in Aristotle. Scientific revolution (Copernicus, Kepler, Galileo, Newton). From Alchemy to Chemistry (Paracelsus, Van Helmont, Boyle, Newton, Priestley, Lavoisier). The new concept of space-

time in the theory of Relativity of Einstein.

- Philosophy of science: Definition of Knowledge in Platonic Theaetetus. Rationalism vs Empiricism. The paradigm of Euclidean Geometry. Scientific methodology (Observation and experiments - Induction vs Deduction). The establishment of scientific methodology in Aristotle and late medieval scholastics (Grosseteste, Francis Bacon, Duns Scotus, William of Ockham). The importance of falsifiability (Carl Popper). Standard science, scientific revolutions, scientific paradigms according to Kuhn. The new role of the observer in quantum mechanics. Philosophy of Information.
- History of ideas: The Socratic theory of ideas in Plato. Rationalists (Parmenides, Plato, Descartes, Spinoza, Leibnitz). Empiricists (Locke, Berkeley, Hume, Francis Bacon). The reappearance of ancient ideas in Renaissance.

Scholarly Communication (code: ALIS-ER-08)

Associate Prof. Dimitrios Kouis dkouis@uniwa.gr

Scholarly Communication is defined as the system through which the creation, evaluation, dissemination and preservation of the research community outputs and accomplishments of any form (e.g. journal articles, monographs, web material, deliverables, patents etc.) are realized. The Scholarly Communication course has the following objectives:

- Understanding: The complete scientific publication cycle including the scientific method, the evaluation of the research outcomes and their publication through the formal channels such as scientific journals, the level of impact, the means for dissemination, the intellectual property rights, as well as the tools for long-term preservation and reuse.
- Analysis: Students will be able to identify, study and analyze the Scholarly Communication major challenges such as research method and output types, scientific publication procedures, peer-review models, traditional and alternative impact indicators, ethics rules and bias cases, the intellectual property rights, new dissemination methods, the application of FAIR principles in research data (Findability, Accessibility, Interoperability and Reusability), the Open Science movement concepts and the data preservation problems.
- Composition: By attending the Scholarly Communication course, students will be able to counsel researchers on how to be more productive during publishing their research results per scientific discipline. Also, they will be in a position to participate effectively as professionals with any role in the scientific publication cycle.
- Evaluation: Students will be provided with the ability to evaluate different publication channels and formats, peer-review models, bibliometric indicators and alternative metrics for impact measurement, licensing models, dissemination tools etc. Also, they will have the chance to develop critical thinking skills to specific challenges that Scholarly Communication faces today, such as Open Access, Open Data and Open Science movements, the Business of Scholarship Paywall, the Science with and for society concept etc.

The course is divided into the following sections:

- Section 1. Understanding the research cycle (scientific method, scientific proposal structure, basic – applied – evaluative research, multidisciplinary-interdisciplinary research etc.)

- Section 2. Understand the Publication cycle (publications categories and formats, scientific publication landscape, peer-review cycle and models, publication bias, serial crisis, the Open Journal System, etc.)
- Section 3. Traditional and modern metrics for research output impact assessment (citation databases, h-index, m-index, impact factor, altmetrics etc.)
- Section 4. Scholarly Communication special topics (Intellectual Property Rights – IPRs, Publication agreements, Open Access - Open Data - Open Science, the FAIR principles, modern dissemination channels, Research Data Management Plan, ethics in Research, the Business of Scholarship Paywall, the Science with and for society concept, European Open Science Cloud etc.).

Digital Museums (code: ALIS-ER-10)

Assistant Prof. Angeliki Antoniou, angelant@uniwa.gr

The course introduces digital museums analyzing multiple perspectives. It provides a string theoretical background to the field and progresses with a set of practical exercises that allow the student to experiment with different design issues.

In particular, the course builds around three main domains, the personal domain of the visitor, the physical domain of the museum space and the socio-cultural domain. After building the necessary theoretical background, we focus on technologies that allow cultural communication, personalization of information, social interaction between visitors, and adaptation to the requirements of the physical space. The course also presents cutting edge technologies for cultural heritage and assists the students in understanding basic design principles of such applications from addressing both content and technology issues.

Some of the topics covered are:

- Cultural communication (websites, social media)
- Sustainability
- Digital learning in cultural heritage
- Personal characteristics of visitors/users
- Cutting edge technologies (Internet of Things, holograms, Robots, 3D printing, Augmented Reality, Virtual Reality, etc.)
- Evaluation of cultural technologies
- Museum guides and narration apps
- Collaborative interfaces
- Games and experience gamification
- Hybrid spaces
- Social function of museums
- Interface design
- Creation of digital content

Health Information and Libraries (code: ALIS-ER- 11)

Ass. Prof. Artemis Chaleplioglou, artemischal@uniwa.gr

This course is a comprehensive introduction to health information management for librarians and information scientists. The nature, confidentiality, organization, circulation, and reuse of this collection of data, which varied from clinical medical records to scientific papers and textbooks, will be explored, presented, and discussed in the context of computer tools and services. The role of librarians and information scientists, their responsibilities and functions in delivering this information to the specialists, medical and biosciences professionals and researchers, as well to non-specialists, patients, families and the general public will be assessed. The learning objectives of the Health Information and Libraries course are:

- The importance of Health Information for the promotion of health, community resilience in food, biosafety, longevity, and quality of life.
- The different types of clinical and biomedical information.
- Data protection regulations, anonymization, and bioethical considerations of stored health data in biomedical research and metadata reuse.
- The needs of library users-driven organization and development of medical, academic, or public libraries' health information collections.
- The importance of health information delivery to specialists in medical diagnostic decision making and continuing biomedical research.
- The methodological information science business approaches medical and bioscience data digital knowledge management.
- Semantic web technologies and biomedical linked data.
- The authoritative international sources of health information on the web.
- Searching techniques, medical and bioscience bibliography retrieve, statistical analysis, and representation.
- Medical Subject Headings and controlled vocabularies.
- Bibliometrics analysis.
- Evidence-Based Medicine.
- Personalized/Precision Medicine.
- Assisting policy makers in decision making for health.
- Patients, families, educational programs, and the general public health promotion.

In the end of this course, it is anticipated for the students to be able to manage health information, to deliver health bibliographies, and to provide guidance for specialists and naïve users for health information resources. Optionally, students could write a short essay on a health information topic of their interest.

History of Mediterranean Civilizations (code: ALIS-ER-12)

Assistant Prof. Yannis Stoyannidis ystoyannidis@uniwa.gr

The course focuses on the history of major civilizations that appeared and produced social constructions in early antiquity. Its main geographical focus will be the

Mediterranean Sea and basin. The courses' educational goal is to acquaint students with the area, the people and constructions, and their political and social relations.

Main themes:

- Ancient Greece
- Macedonian Empire
- Roman Empire
- Byzantine Empire

Students are expected to discuss and comprehend the lines that bound these political regimes and the cultural transformations that followed. Armies, political revolutions and alliances, artists and localities will reveal a new version of the ancient world.

Course Exam: Students are expected to visit a monument or artefact and connect it with the civilizations discussed in the course.

Cognitive Science (code ALIS-ER-13)

Pr Markos Dendrinis, mdendr@uniwa.gr

The course introduces cognitive science to students and in particular, it focuses around the following topics:

1. DIKW Pyramid (Data – Information – Knowledge – Wisdom). Elements of the philosophy of information.
2. Propositional and Categorical Calculus. Theoretical analysis, examples, application in the Prolog environment.
3. Knowledge extraction from raw datasets without any a priori information, based on principal component analysis. Working environment: WEKA data mining platform with focus on clustering.
4. Presentation of the cognitive structures of taxonomy, lexicon, thesaurus, and ontology.
5. Ontology development with the open-source software OWL-Protégé, which also integrates an automatic deduction tool. Presentation of the processes for creating a class hierarchy, defining individuals of classes, defining relationships between individuals of the same or different classes (object properties), defining characteristics of the individuals of a class (datatype properties), and defining classes through restrictions. Checking logical consistency, automatic extraction of the logical hierarchy based on the definitions of the classes. Development of queries in SPARQL language.
6. Presentation of the RDF/RDFS model with extensive examples of declaring various types of documents, such as books, websites, works of art, etc.

Development of Academic and Professional Skills (code ALIS-ER-14)

Assistant professor Angeliki Antoniou, angelant@uniwa.gr

The course aims at developing students' 21st century skills like:

- Search, analysis, and synthesis of data and information, using the necessary technologies
- Decision-making
- Promotion of free, creative, and inductive thinking
- Project design and management
- Autonomous work
- Working in an interdisciplinary environment
- Generation of new research ideas
- Respect for diversity and multiculturalism
- Exercise of criticism and self-criticism
- Promotion of free, creative, and inductive thinking
- Teamwork

Students will be asked to develop individual and groups projects, to produce creative content, to engage in debates, to create their CVs, enhance their presentation skills, etc. The course will be taught in English but student projects and presentations can be in English and Greek.