



BYZANTINE STUDIES

VIA AI & IMMERSIVE TECHNOLOGIES

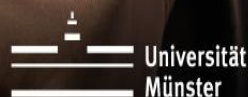
Byzantine Scholarship Powered
by AI & Immersive Technologies

Interdisciplinary, English-taught
Joint MA redefining cultural
research

Joint MA Degree

- ◆ University of Ioannina (Greece)
- ◆ University of Münster (Germany)

**PRESERVE THE PAST
ENGINEERING THE FUTURE**



University of Ioannina
Department of History and Archaeology
D3.3 PSP Student Guide, including: courses, course categories, in-person and distance learning methods (synchronous, asynchronous, blended), assessment methods, the total number of ECTS of the PSP, the percentage of ECTS that are offered through asynchronous distance learning methods and the expected learning outcomes of the PSP
[Faculty Board Decision, No 542, 27/5/2026]

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The Department of History and Archaeology

The Department of History and Archaeology belongs to the Faculty of Philosophy of the University of Ioannina, which was founded in 1964 as an annex to the Faculty of Philosophy of the Aristotle University of Thessaloniki (B.Δ. 735/1964, ΦΕΚ Α' 240), before becoming an independent Higher Educational Institute in 1970. Since 1984, the Department has been part of the School of Philosophy, operating since then under the Law 1268/82.

The Department of History and Archaeology is composed of the following four sectors:

- The Sector of Ancient and Medieval History
- The Sector of Modern History
- The Sector of Archaeology and Art History
- The Sector of Folklore Studies

Studies

The Undergraduate Study Program, as a core component of the Department's academic curriculum, reflects and highlights the Department's fundamental scientific and academic identity within the field of the Humanities. The promotion of research in the areas of History, Archaeology, Folklore Studies, and Art History, as well as the education of new scholars in the humanities and social sciences through an interdisciplinary perspective, constitute the main pillars around which the Undergraduate Study Program (USP) is developed. The program is structured within a well-organized and coherent academic framework. Students are educated in accordance with European and national qualifications frameworks and are equipped with the knowledge, skills, and competencies required for the labor market. Throughout their studies, they have access to high-quality support services (libraries, student welfare services, etc.) and participate in research and academic activities. The educational process is organized around a student-centered approach while maintaining a high standard of academic quality.

In line with the University's overall strategy of fostering student-centered learning, ensuring the quality of the educational process, and strengthening international outreach, the Undergraduate Study Program aims to advance the study of Ancient, Medieval, and Modern History, Archaeology, Art History, Folklore Studies, and Social Anthropology through academic teaching and research.

The Department of History and Archaeology offers two specializations leading to a degree: History and Archaeology.

For the academic year 2025–2026, the Department offers the following three postgraduate programs:

- Byzantine Studies
- The Ancient World: Historical and Archaeological Theory and Practice
- History and Culture of the Modern and Contemporary World

The Department's graduates can be employed at:

- Public and private secondary schools as teachers,
- The Greek Archaeological Service and the Greek Ministry of Culture,
- Museums and other cultural institutions,
- Research centres, libraries, and archives,
- Greek National Tourism Organisation,
- Private and public centres and services as members of their research and scientific personnel,
- Diplomatic service of the Greek Ministry of Foreign Affairs, Press

Postgraduate Study “Byzantine Studies via AI and Immersive Technologies”

Subject Area – Objectives – Learning Outcomes

A. Subject Area and Objectives of the Master’s Program

The PSP focuses on the study of the Byzantine world through the application of contemporary theoretical, methodological, and technological approaches. The program is designed for an international academic audience and aims to provide high-level education and research training in the fields of Byzantine Studies, Digital Humanities, and Computer Science.

The program is implemented through a collaboration between the Department of History and Archaeology and the Department of Computer Science and Telecommunications of the University of Ioannina, and the Department of Byzantine and Modern Greek Studies at the Universität Münster, Germany, promoting the interdisciplinary and international dimensions of teaching and research.

The principal objective of the program is to integrate Byzantine Studies with modern digital technologies, particularly applications of Artificial Intelligence and immersive technologies, with the aim of developing new research approaches, fostering innovation, and promoting interdisciplinary collaboration.

The program is structured around three interrelated strategic pillars:

- a) Educational innovation
- b) Research excellence
- c) The international promotion of Byzantium as a significant component of Greek and European cultural heritage.

B. Scientific and Academic Field

The PSP combines the theoretical and research traditions of Byzantine Studies with contemporary technological methods and tools. It provides specialized knowledge in Byzantine history, archaeology, art, cultural heritage, and the auxiliary disciplines of the field, situating them within the broader framework of Digital Humanities. At the same time, the program introduces students to the applications of Artificial Intelligence in the humanities, immersive technologies such as Mixed Reality (MR), and contemporary methods for the analysis, documentation, management, and interpretation of historical and cultural data.

Through this interdisciplinary approach, students gain both a solid foundation in Byzantine Studies and advanced digital competencies, enabling them to engage with innovative research methodologies and emerging technological developments in the study and preservation of cultural heritage.

C. Interdisciplinary Dimension and Innovation

The program promotes interdisciplinary collaboration between the humanities, computer science, and information technologies, enhancing students’ ability to operate effectively in complex research and professional environments. Training in advanced digital technologies enables students to transform historical and cultural material into structured digital knowledge, develop innovative approaches for the documentation and promotion of cultural heritage, and utilize digital environments for the representation and interpretation of the Byzantine world.

By linking historical research with digital innovation, the Master’s Program contributes to the development of new academic and professional opportunities in the fields of culture, education, and research. Through this interdisciplinary framework, graduates acquire both specialized expertise and transferable digital skills, preparing them to address contemporary challenges in the preservation, study, and dissemination of cultural heritage.

D. Academic and Professional Prospects

The program prepares graduates for professional careers in fields such as education, research, museums, archives, libraries, cultural organizations, cultural heritage management, Digital Humanities, and cultural tourism. At the same time, it provides a strong academic and methodological foundation for further study at the doctoral level, both in Byzantine Studies and in the broader field of Digital Humanities.

Participation in an international and interdisciplinary academic environment fosters the development of transferable skills that are essential for graduates' professional and research advancement at both national and international levels. These skills include critical thinking, digital literacy, interdisciplinary collaboration, project management, and the ability to apply innovative technologies to the study, preservation, and promotion of cultural heritage.

Learning Outcomes

Upon successful completion of the Program, graduates will be able to:

- Analyze and interpret Byzantine history, society, art, and cultural heritage using contemporary theoretical and methodological approaches.
- Apply critical thinking and scholarly evidence-based methods to the study and interpretation of historical and cultural phenomena related to the Byzantine world.
- Utilize digital tools, Artificial Intelligence applications, and immersive technologies for the research, documentation, analysis, management, and promotion of cultural heritage.
- Manage and process complex historical and cultural data by applying contemporary methods of digital analysis and documentation.
- Design and implement interdisciplinary research and cultural projects that integrate knowledge from the humanities and technology.
- Collaborate effectively in international and interdisciplinary environments, taking initiative within collective projects and research activities.
- Address complex problems through synthetic and creative approaches, drawing upon diverse academic disciplines and methodological frameworks.
- Communicate and disseminate knowledge related to Byzantine cultural heritage to a variety of academic, professional, and public audiences.
- Contribute to the protection, management, and promotion of cultural heritage through the application of modern technological and scholarly approaches.
- Employ specialized and transferable skills that support professional development in the fields of education, research, culture, and the digital economy.

These learning outcomes equip graduates with the academic expertise, digital competencies, and interdisciplinary perspective required to pursue careers in cultural heritage institutions, research centers, educational organizations, and technology-driven cultural initiatives, as well as to continue their studies at the doctoral level.

Administration and Management of the Program

The bodies responsible for the organization and operation of the Program are the following:

1) The Senate of the University of Ioannina, with responsibilities provided in the current Greek legislation (*Article 81 of Law 4957/2022*).

- 2) The Postgraduate Studies Committee, with responsibilities provided in the current Greek legislation (*Article 81 of Law 4957/2022*).
- 3) A Coordinating Committee (CC)
- 4) The Director of the Program
- 5) Institutional Project Coordinator, who will serve as the primary contact person for the management of the Project at the respective institution, as follows:
 - For University of Ioannina: Prof. Dr. Christos Stavrakos
 - For the University of Münster: Prof. Dr. Michael Grünbart
- 6) An Administrative Secretariat

Period of Operation

The Postgraduate Study (PSP) shall commence in the academic year 2026–2027 and shall remain in operation for a period of five (5) academic years, with the possibility of renewal or extension in accordance with the applicable legal framework.

Duration of Studies, ECTS Credits and Study Regulations

1. The minimum duration of study in the PSP is four (4) academic semesters, including the time required for the preparation and submission for assessment of the Master's Thesis, which is conducted during the fourth semester of study. In each semester, students may earn up to thirty (30) credit units (ECTS). The Department encourages the timely completion of studies, within the framework of a student-centred approach and in support of students' academic progress.
2. The award of the Master's Degree requires the attendance and successful assessment of postgraduate students in five elective courses in Byzantine Studies and four elective courses in Informatics, including the Master's thesis, and the acquisition of 120 ECTS credits. The analytic context of the courses is included in the Studies Guide of the PSP.
3. In accordance with Article 12.6 of the MSc Regulation of the University of Ioannina, attendance at courses and seminars of the PSP is compulsory, and an attendance register is maintained by the instructor. Each postgraduate student is allowed up to three (3) absences per course, which extends over thirteen (13) teaching weeks. The PSP implements both synchronous and asynchronous distance learning, in accordance with *Article 12.5 of the MSc Regulation of the University of Ioannina*.
4. Each course lasts one academic semester. The rescheduling (make-up) of classes, in order to complete the required teaching hours, is mandatory and is carried out in accordance with *Article 12.7 of the MSc Regulation of the University of Ioannina*.
5. In accordance with *Articles 11.5, 11.6, 11.7, and 11.8 of the MSc Regulation of the University of Ioannina*, part-time study is available upon a reasoned application by the student and approval by the Coordinating Committee, in accordance with the provisions of Law 4942/2023 (Government Gazette B, Article 11, para. 5).
- 5). Students who have not exceeded the maximum duration of study may, following a reasoned application to the Coordinating Committee, be granted a suspension of studies for up to two (2) academic semesters for serious reasons, such as military service, health issues, maternity leave, or residence abroad. The application must be accompanied by the necessary supporting documents justifying the reasons for the suspension. During the suspension period, student status is also suspended, without the possibility of participating in the Program's educational activities, and the semesters of suspension are not counted toward the maximum duration of study. The student is required to re-enroll in the PSP at least two (2)

weeks before the expiration of the suspension in order to resume their studies normally. In the event of a suspension for two consecutive semesters, the possibility of early reintegration into the Program is provided, following a relevant application submitted up to two (2) weeks before the start of the second semester of suspension. Furthermore, in exceptional cases, such as serious family or health reasons, an extension of study beyond the maximum provided limit may be granted, following a reasoned application and approval by the Coordinating Committee, for a period of up to four (4) academic semesters.

Selection and Admission of Postgraduate Students

The PSP is open to graduates of Higher Education Institutions (HEIs) in Greece or equivalent recognized institutions abroad, in accordance with the provisions of the applicable legislation and the Regulations for Postgraduate Studies of the University of Ioannina (Government Gazette 4942/B/2023, Articles 8 and 9). On dates determined by the Coordinating Committee (CC), the Program annually announces up to thirty (30) available places through an open call for applications. The relevant call is published on the Program's website as well as on the websites of the three collaborating Departments.

By decision of the Coordinating Committee, an Admissions Evaluation Committee is appointed to examine and assess the applications submitted by prospective students. Based on the established selection criteria, the Committee prepares a ranking list in descending order and recommends the admission of a number of candidates equal to the maximum number of available places specified in the call for applications. The final approval of admissions and enrolments is granted by the Department Assembly.

Admission Requirements

Applicants must satisfy the following requirements:

a) A first-cycle degree (Bachelor's degree) from a Greek Higher Education Institution or an equivalent recognized institution abroad.

Recognition of Foreign Academic Qualifications:

The Coordinating Committee of the Program is responsible for the evaluation and recognition of academic qualifications awarded by higher education institutions for admission purposes. The recognition of foreign qualifications is carried out in accordance with the provisions of the Lisbon Recognition Convention and the applicable national legislation of each partner country. In cases where national legislation requires the formal recognition of qualifications awarded by another partner institution, such recognition shall be carried out by the competent national authority or, where applicable, by the enrolling institution, in accordance with the relevant national procedures.

b) Proof of English language proficiency at a minimum level of B2 (Common European Framework of Reference for Languages).

Selection Criteria

The selection process is based on objective criteria that ensure the principles of equality, transparency, and meritocracy. Candidates with equal overall scores may be admitted up to a percentage corresponding to 30% of the maximum number of admitted students.

Applicants are evaluated on a scale of 100 points according to the following criteria:

- Bachelor's degree grade: up to 30 points
- Oral interview conducted by the Admissions Evaluation Committee: up to 25 points
- Research activity, including publications in relevant academic journals and/or presentations at conferences in related fields: up to 15 points
- Professional experience in a field relevant to the MSc Program: up to 10 points
- Statement of purpose / letter of motivation: up to 10 points

- Two (2) letters of recommendation (from faculty members, researchers, or employers): up to 10 points

Enrolment Procedure

In accordance with Article 4 of Ministerial Decision 18137/Z1/2023 (paragraph ia), following the completion of the selection process and the approval of admissions by the Department Assembly, successful applicants are registered in the electronic student registry of the University of Ioannina.

Registration is carried out through the Secretariat of the coordinating Department within the deadline specified in the Program's call for applications. Upon enrolment, each student is provided with an institutional account (username and password), granting access to all digital services and distance-learning platforms of the University.

Course Registration and Study Load Management

Course registration constitutes a core academic and administrative procedure within the framework of the student-centred operation of the PSP and the assurance of study quality. At the beginning of each academic semester, students are required to submit electronically a declaration of the courses they intend to attend and be assessed in, via the University of Ioannina information system. For newly admitted students, registration takes place following the completion of their enrolment in the Department. The course registration period lasts two (2) weeks from the start of each semester and is announced in a timely manner by the Secretariat. Timely submission of course registration is a necessary prerequisite for participation in teaching activities, access to educational materials, and participation in the examinations of the declared courses.

The maximum number of credit units (ECTS) that may be declared per semester is thirty (30), in accordance with the European Credit Transfer and Accumulation System. No restriction applies to outstanding courses from previous semesters, in accordance with the specific provisions of the Study Program.

Curriculum, Structure and ECTS Requirements

The PSP's Program curriculum is interdisciplinary, combining theoretical training in Byzantine Studies with specialized courses in digital methods for cultural heritage documentation, Artificial Intelligence technologies, and immersive digital environments.

The program covers subject areas essential for the study, research, and digital promotion of Byzantine culture. These include, among others, photogrammetric documentation of objects, three-dimensional modelling, historical data processing, and the scholarly representation of Byzantine spaces through virtual and augmented reality applications. At the same time, courses in digital applications aim at the systematic organization, interconnection, and interpretation of historical data in interoperable digital environments, while courses in Byzantine Studies provide an in-depth examination of Byzantine culture across its full geographical and cultural extent.

In this way, the Program offers a comprehensive study framework that combines academic specialization with practical training in the use of modern digital technologies for the research, documentation, and promotion of cultural heritage.

From a total of nineteen (19) offered courses, students of the Program are required, during the first three semesters, to select five (5) courses from the field of Byzantine Studies and four (4) courses from the field of Computer Science, including two (2) compulsory courses.

In particular, the award of the Master's Degree requires the successful completion and assessment of five (5) elective courses in Byzantine Studies and four (4) elective courses in Informatics, as well as the Master's Thesis, amounting to a total of one hundred and twenty (120) ECTS credits. The detailed content of the courses is provided in the Study Guide of the PSP.

Each course carries ten (10) ECTS credits, while the Master's Thesis carries thirty (30) ECTS credits. The total number of ECTS credits required for the award of the Master's Degree is 120 ECTS.

The Study Program of the Postgraduate Program may be revised on an annual basis in order to ensure the continuous updating and enhancement of its academic content, its alignment with current scientific and professional developments in the field, and the optimal utilization of the available teaching staff. Any proposed modifications to the Study Program are prepared by the Coordinating Committee and submitted to the Postgraduate Studies Committee for approval, in accordance with the applicable regulations.

Structure of Studies

The duration of studies in the Postgraduate Program is four (4) academic semesters and corresponds to a total workload of one hundred and twenty (120) ECTS credits.

First Semester

One (1) Compulsory Course – 10 ECTS

Two (2) Elective Courses – 20 ECTS

Semester Total: 30 ECTS

Second Semester

One (1) Compulsory Course – 10 ECTS

Two (2) Elective Courses – 20 ECTS

Semester Total: 30 ECTS

Third Semester

Three (3) Elective Courses – 30 ECTS

Semester Total: 30 ECTS

Fourth Semester

Preparation and Public Defense of the Master's Thesis – 30 ECTS

Semester Total: 30 ECTS

Total Program Workload

The total workload of the Program amounts to one hundred and twenty (120) ECTS credits.

The table below presents the courses offered by the Program in detail.

Course	Semester	Instructor	ECTS
Byzantine History and Culture	1st	Christos Stavrakos (elective)	10
The magic of small objects: byzantine seals and coins	3rd	Christos Stavrakos (elective)	10
Functions of Words and Letters in Byzantine Daily Life	2nd	Michael Grünbart (elective)	10
Byzantium and its Northern Neighbours	3rd	Georgios Kardaras (elective)	10
The Splendor of Byzantine Illuminated Manuscripts: The Art of Miniature from Late Antiquity to the End of the Eastern Roman Empire	3rd	Apostolos Mantas (elective)	10
The Art of War in Byzantium: Military Thought, Strategy, and Cross-Cultural Conflict	2nd	Efstratia Sygkellou (elective)	10
Byzantium and Armenia: From the Arshakuni to the Het'umids (4th-14th Centuries)	2nd	Konstantinos Takirtakoglou (elective)	10
Constantinople: The Power and Splendour of the Byzantine capital	1st	Galina Fingarova (elective)	10
Icons and Experience: Seeing, Believing, and Understanding Byzantine Art	1st	Fanie Lytari (elective)	10
After Byzantium: Living Icons and the Global Journey of a Sacred Tradition	2nd	Fanie Lytari (elective)	10
Imperial Ideology and Collective Identities in Byzantine Society (4 th –15 th c.)	1st	Panagiotis Theodoropoulos (elective)	10
The Reception of Byzantium in Modern and Contemporary Literature. Comparative approaches	3rd	Yorgos Archimandritis (elective)	10
AI as a Research Partner in Byzantine Studies	3rd	Ioannis Tsoulos (elective)	10
Fundamentals of AI and Machine Learning for Byzantine Studies I	1st	Chrysostomos Stylios (compulsory)	10
Fundamentals of AI and Machine Learning for Byzantine Studies II	2nd	Petros Karvelis (compulsory)	10
Geographic Information Systems and Spatial Analysis in Byzantine Studies	2nd	Ioannis Tsoulos (elective)	10

Interactive Cultural Applications and Creative Computing for Byzantine Heritage	3rd	Chrysostomos Stylios (elective)	10
Mixed Reality and Digital Representation of Byzantine Culture	1st	Chrysostomos Stylios (elective)	10
Natural Language Processing for the Byzantine Corpus	3rd	Petros Karvelis (elective)	10
Master's Thesis	4		30

Course Summaries

First Semester

(Christos Stavrakos) Byzantine History and Culture: This course offers a comprehensive introduction to the history, culture, and historiography of Byzantium, understood as the medieval continuation of the Roman Empire. It begins by addressing the problem of defining “Byzantium” itself, examining modern scholarly approaches, terminology, and the sources and methods used in Byzantine Studies. Students are encouraged to engage critically with the concept of Roman continuity and the historiographical construction of “Byzantine” identity. The course then traces the major historical transformations from Late Antiquity to the emergence of Byzantium (4th–7th centuries), focusing on the reigns of Constantine I and Justinian I, the development of Christian imperial ideology, and the structural crises of the seventh century. Attention is given to political authority, imperial administration, taxation, law, and the evolving provincial system, including the thematic organization of the empire. Religious culture forms a central theme, with exploration of Church–state relations, doctrinal disputes, ecumenical councils, and the role of monasticism. Broader social structures are also examined, including urban and rural life, family organization, gender roles, and ethnic identities. Economic life is studied through agrarian production, taxation, coinage, trade networks, and the Mediterranean economy. Military history and diplomacy are considered alongside frontier zones and interactions with Arabs, Bulgars, Rus, and Normans. The course also explores Byzantium’s place in a wider world of cultural exchange with Islam, Latin Christendom, and the Slavic world. Artistic and intellectual traditions are analysed through architecture, icons, mosaics, education, historiography, theology, and science. The final sections address the empire’s crises, including 1204 and 1453, as well as Byzantium’s post-imperial legacy and its modern reception. The course concludes with reflections on current trends in Byzantine Studies.

(Galina Fingarova) Constantinople: The Power and Splendour of the Byzantine capital: This course examines Constantinople, the capital of the Byzantine Empire, as a centre of political power, religious authority, and artistic production from Late Antiquity to the end of the Byzantine period, while also addressing its long-term legacy. Drawing on material remains, archaeological evidence, and written sources, it reconstructs the development of the city’s urban fabric and its role as a stage for imperial power and religious expression. Beginning with the historical development and urban topography of

Constantinople, the course further analyses its infrastructure, including fortifications, transport networks, and water systems that sustained its population and ensured its security. Public spaces, palaces, and residential architecture are discussed as frameworks for social interaction and imperial representation. A central component is the study of sacred architecture across the Early, Middle, and Late Byzantine periods, examining the evolution of church design, spatial organisation, and the integration of liturgical furnishings and decorative programs. In parallel, the course investigates Byzantine visual culture through portable works of art such as icons, ivory carvings, and reliquaries, highlighting their role in devotion, ritual, and expressions of authority. Finally, the course addresses the transformation of Constantinople after 1453, considering the reuse and reinterpretation of Byzantine monuments under Ottoman rule, as well as the city's enduring legacy in modern scholarship and cultural memory.

(Fanie Lytari) Icons and Experience: Seeing, Believing, and Understanding Byzantine Art: The course examines the Byzantine icon as a multifaceted phenomenon situated at the intersection of art, theology, and lived religious experience. It begins with an exploration of vision and perception, approaching seeing as an active and culturally shaped process that informs the understanding of images. The theological foundations of the icon are then addressed, with emphasis on the relationship between image and prototype, the concept of presence, and the doctrinal significance of the Incarnation. Attention is given to the materiality of icons, including techniques, materials, and artistic practices, highlighting how physical properties contribute to meaning. The course situates icons within liturgical space and ritual performance, emphasizing their integration into architecture, movement, sound, and light. The historical context of Iconoclasm is examined as a critical moment in the development of theories of images and their defense. Further themes include iconographic analysis and narrative structures, as well as the experiential dimensions of devotion, emotion, and embodied engagement. The multisensory environment of Byzantine worship is explored as fundamental to the perception of the icon. Consideration is also given to issues of patronage, authority, and social identity, alongside modern theoretical approaches that address materiality, agency, and the ongoing "life" of icons. The course concludes with an examination of the reception, reinterpretation, and continued cultural presence of Byzantine icons beyond their original context.

(Panagiotis Theodoropoulos) Imperial Ideology and Collective Identities in Byzantine Society (4th–15th c.): The course studies the interaction of political ideology and collective identities in Byzantine society. It focuses on imperial political ideology and its evolution over the centuries under the weight of various political, social and ideological pressures. What is more, it examines the formation of collective identities (expressions of otherness and self-identity) within the said framework of ideological change. The examination of the interaction between ideology and identity will move along four axes: Capital-provinces (center-periphery), language, Orthodoxy, and the use of the past. The course will raise theoretical questions regarding the study of collective identities and political ideologies. The first ten lectures will analyze examples of interaction of political ideology and collective identities covering the period from the reign of Constantine the Great (306-337) to the fall of Constantinople by the Ottomans in 1453. The last two lectures will be thematic and delve into the four axes outlined above. The last lecture will be dedicated to the presentation of student essays.

(Chrysostomos Stylios) Fundamentals of AI and Machine Learning for Byzantine Studies I: This course provides the conceptual and methodological foundation that underpins all computational work in the

Byzantine Studies via AI and Immersive Technologies program. It is designed for students trained in the humanities who bring deep domain knowledge of the Byzantine world but limited prior exposure to Artificial Intelligence or Machine Learning. The course proceeds from a core conviction: before students can use computational tools productively, they must understand what those tools assume, what they cannot see, and where they fail. The opening weeks establish the intellectual landscape of AI and its relationship to Byzantine data; its richness, its incompleteness, its ambiguity, and its resistance to the clean, well-labelled datasets that most machine learning methods presuppose. Uncertainty and ambiguity are treated not as problems to be solved but as first-class scholarly facts that students must learn to represent, reason about, and communicate. Machine learning concepts are introduced at the level of conceptual fluency rather than technical implementation: students learn what training means, what a model is, how evaluation metrics work, and how to read AI outputs critically rather than deferring to computational authority. This critical framework is applied directly to the digitisation technologies most relevant to Byzantine Studies: OCR and HTR for manuscript transcription, with detailed attention to the specific challenges of Byzantine scripts, editorial conventions, and material degradation. The course closes with a practical arc: students survey the principal Byzantine digital repositories, learn research data management principles suited to humanities datasets, examine a substantial Byzantine AI project as a case study, and design and execute a small original mini-project. The final sessions function as a workshop, where students present and discuss their work and collectively reflect on what the first semester has revealed and what questions it has opened for the second.

(Chrysostomos Stylios) Mixed Reality and Digital Representation of Byzantine Culture: The course explores how digital technologies can be used to study, represent, and communicate Byzantine culture in new ways. It introduces students to the use of immersive environments to recreate historical spaces, objects, and artworks. Emphasis is placed on understanding how digital reconstructions can support both research and public engagement. Students learn how cultural heritage can be documented and presented through interactive and visual means. The course connects historical knowledge with modern digital storytelling approaches. It highlights the importance of accuracy and interpretation when representing the past digitally. Learners develop the ability to present complex historical content in accessible formats. The course also encourages creativity in designing experiences that bring Byzantine culture to life. Collaboration and interdisciplinary thinking are key aspects of the learning process. Students gain experience in communicating heritage to both academic and general audiences. Ethical considerations around reconstruction and authenticity are also discussed. By the end, students can create meaningful digital representations of Byzantine heritage.

Second Semester

(Michael Grünbart) Functions of Words and Letters in Byzantine Daily Life: This course explores the diverse functions of words and letters in Byzantine society, with a particular focus on Middle Greek sources and material culture. Through the study of textual, epigraphic, and archaeological evidence, students are introduced to key sources, research tools, and electronic databases relevant to the field. The course examines writing not only as a medium of communication but as a force that shaped authority, identity, administration, and everyday life. Topics include the use of names, signatures, and monograms in legal and social contexts; inscriptions in public, ecclesiastical, and commemorative settings; and the role of writing in trade, marketplaces, and systems of security through stamps and

seals. Students will also investigate how words and letters functioned in magical practices, memory culture, and the preservation of social status. Special attention is given to material objects such as coins, weights, amphorae, and inscribed artefacts as evidence for economic and social networks. The course concludes with an exploration of literacy and education, considering the practical significance of reading and writing in Byzantine daily life. Overall, the course offers a broad introduction to the cultural, social, and institutional power of writing in Byzantium.

(Efstratia Sygkellou) The Art of War in Byzantium: Military Thought, Strategy, and Cross-Cultural Conflict: This course offers a comprehensive examination of the Byzantine “art of war” as a multifaceted system of military thought, strategy, and cultural practice. Drawing on primary sources such as the *Taktika*, historical narratives, and documentary evidence, it explores how warfare was conceptualized, organized, and experienced. Particular attention is given to leadership, army structure, and military technology, as well as to Byzantium’s interactions with neighboring powers, including steppe peoples, Arab polities, Crusaders, Normans, and the early Ottomans. The course also addresses the ideological dimensions of warfare, highlighting the roles of imperial identity, religion, and ecclesiastical authority, and situates Byzantine warfare within the broader medieval world.

(Konstantinos Takirtakoglou) Byzantium and Armenia: From the Arshakuni to the Het’umids (4th-14th Centuries): This course will examine the relations between the Byzantine Empire and the Armenian world from the fourth to the fourteenth century. For the most part, the course is structured around the principal milestones in medieval Armenian history: (a) the Arsacid period and the Christianisation of the country; (b) the period during which Armenia became a bone of contention in the Byzantine–Sasanian conflicts; (c) the period of Arab rule in Armenia; (d) the period of the Bagratid and Artsruni kingdoms; (e) the period of the annexation of these kingdoms by the Byzantine Empire; and (f) the period of the state of Cilician Armenia. In addition, particular aspects of these relations will be examined, including the relevant historiography and the presence of Armenians in the Byzantine army. Finally, a series of classes will be devoted to familiarising students with research methodology and useful digital tools, with the aim of preparing them to write a paper on a topic related to the subject matter of the course.

(Fanie Lytari) After Byzantium: Living Icons and the Global Journey of a Sacred Tradition: The course examines the transformation and continuity of Byzantine icon painting in the post-Byzantine world, approaching the fall of Constantinople not as an endpoint but as a moment of dynamic transition. It explores how artistic, theological, and cultural traditions persist and evolve across time, shaping a living and adaptable visual language. Central to the course is the concept of the icon as a “living object,” embedded in liturgical practice, devotional life, and communal identity. Attention is given to artistic production through workshops, itinerant painters, and transregional networks, highlighting the circulation of styles and iconographic models across the Mediterranean and beyond. The enduring theological foundations of the image are revisited, emphasizing the continued relevance of concepts such as presence, mediation, and sanctity. The course further investigates the mobility of icons through processes of trade, pilgrimage, and diaspora, considering their role as carriers of memory and identity in shifting historical contexts. It also examines the changing status of icons from sacred objects within ecclesiastical settings to museum artefacts and commodities within the global art market, raising questions of interpretation, value, and cultural meaning. Finally, the course addresses contemporary engagements with icons, including their reinterpretation in modern artistic practices and their

transformation through digital technologies. Through these perspectives, the post-Byzantine icon emerges as a dynamic and evolving phenomenon, continuously negotiating its place between tradition and change, locality and global circulation.

(Petros Karvelis) Fundamentals of AI and Machine Learning for Byzantine Studies II: Building directly on the foundations established in Course I, this course moves from conceptual literacy to applied practice. Students arrive already equipped with an understanding of how machine learning works, how to evaluate its outputs critically, and how the specific character of Byzantine data shapes and constrains what computation can do. Course II puts these foundations to work across the principal methodological families now active in digital Byzantine Studies. The course opens with Natural Language Processing, developing the understanding and critical perspective needed to work productively with NLP tools applied to historical Greek — from pipeline architecture to named entity recognition and information extraction. Large Language Models are addressed directly and honestly: students engage with both their genuine utility for research support tasks and the specific failure modes that make their outputs unreliable without verification. Computer vision follows, moving from conceptual foundations to sustained engagement with applications in Byzantine material culture (icons, seals, coins, illuminated manuscripts, mosaics). Attention then turns to the methods for representing and querying structured knowledge that underpin the most ambitious Byzantine digital humanities projects: knowledge graphs, ontologies, and Linked Open Data. Historical GIS and network analysis complete the toolkit, each treated with sustained attention to the specific opportunities and epistemological risks they present for Byzantine historical research. A dedicated ethics session provides a framework grounded in practice rather than abstraction. The course culminates by bringing everything together. A session on multimodal research addresses the frontier where textual, visual, and spatial evidence must be integrated within a single project. A capstone cycle closes the course: students first present works-in-progress in a workshop setting and receive structured peer and instructor feedback, then deliver final presentations accompanied by a collective synthesis of what the full two-course sequence has achieved and where it points for the field.

(Ioannis Tsoulos) Geographic Information Systems and Spatial Analysis in Byzantine Studies: *Mapping the Byzantine World* is an introductory course in Geographic Information Systems (GIS) designed specifically for students of Byzantine history, archaeology, and culture. It requires no prior technical knowledge: all concepts are introduced from the ground up and taught entirely through Byzantine research questions, datasets, and case studies. Using the open-source software, students progress from the fundamental principles of spatial data and coordinate systems to more advanced techniques including terrain analysis, temporal mapping, and cartographic composition. The course is structured around five thematic phases, that is orientation, data creation, spatial analysis, advanced analysis, and critical reflection, each anchored to a domain of Byzantine studies: political geography, ecclesiastical networks, military logistics, monastic landscapes, and territorial change over time. Students engage with primary spatial datasets drawn from resources such as the Pleiades gazetteer, the Ancient World Mapping Center, and digitized historical cartographic sources including the Tabula Peutingeriana. A core commitment of the course is to treat GIS not merely as a visualization tool but as an instrument of historical inquiry, one that raises its own epistemological questions about how space is represented, what any map includes and excludes, and what it means to impose a modern coordinate system onto a medieval world. By the end of the course, students will have the technical literacy to design and

execute an original spatial analysis project and the critical vocabulary to situate that work within the broader field of spatial humanities.

Third Semester

(Christos Stavrakos) The magic of small objects: byzantine seals and coins: This postgraduate course offers a specialised introduction to Byzantine sigillography and numismatics as complementary fields for the study of Byzantine history, administration, economy, and material culture. Combining theoretical approaches with object-based analysis, the course examines seals and coins not merely as artefacts, but as primary historical sources that illuminate structures of power, systems of communication, social identities, and economic exchange across the Byzantine world. The first part of the course focuses on Byzantine sigillography, introducing the methods, sources, and major research tools of the discipline, including principal corpora and prosopographical databases. Students explore the historical development of sigillographic studies, the typology and iconography of seals, and their functions within imperial administration, chancery practice, diplomacy, and ecclesiastical structures. Particular emphasis is placed on seals as evidence for reconstructing offices, careers, regional networks, and broader patterns of Byzantine governance and society.

The second part examines Byzantine numismatics from Late Antiquity to the fifteenth century. Topics include the structure and evolution of the Byzantine monetary system, major imperial reforms, mint organisation, circulation, and economic networks. Students analyse coinage as evidence for fiscal policy, market exchange, and Mediterranean connectivity, while also considering the ideological significance of coin iconography as an expression of imperial authority and religious legitimacy. The course concludes with the transformation of Byzantine coinage in the Palaiologan period and the fragmentation of the monetary system after 1204. Throughout, students engage critically with material, textual, and digital evidence, developing advanced methodological skills and research approaches central to contemporary Byzantine Studies.

(Georgios Kardaras) Byzantium and its Northern Neighbours: The course offers a global view of Byzantium's northern neighbours from the 4th to the 15th c. approaching the various neighbours of Germanic, Slavic and Central Asian origin, occupied the territory of Central, Eastern and Southeastern Europe after migrations or territorial expansion due to wars. The northern neighbours are examined not only in the frame of political relations, namely the targets of the external policy of Byzantium in the aforementioned areas, but also from the cultural point of view and other parameters such as the trade, the state ideology etc. Further, clarifying initially the Roman/Byzantine world's perceptions of the barbarian peoples, as well as the political and cultural meaning of the border (in our case the Lower Danube with the northern bank being identified as *barbaricum*), the ethnotic and cultural changes brought about by the "barbarian" settlements and the policy of Byzantium for their integration into its political and cultural sphere of influence, including the Christianization etc. are topics under scrutiny. Main target is a clear picture about the conditions of settlement and political formations in Central, Eastern and Southeastern Europe regarding also the role that Byzantium had in each case for such a process. As for method of examination, the writing of an essay is compulsory on a topic chosen by the student after discussion with the instructor of the course.

(Apostolos Mantas) The Splendor of Byzantine Illuminated Manuscripts: The Art of Miniature from Late Antiquity to the End of the Eastern Roman Empire: The history of illuminated manuscripts begins

in Antique Egypt with the oldest illuminated papyri. The Greeks became acquainted with papyrus in the 7th century BC, leading to the establishment of scriptoria and libraries. A fundamental role has played Alexandria with its Library later, and the medium of writing evolved from the papyrus and roll to the parchment and codex. In the art of the codex, miniature painting underwent several stages of development, progressing from the use of colors and integration within the text to the complete emancipation of the text and the creation of full-page miniatures and various decorative elements. Notable examples of this evolution include the *Ambrosian Iliad* for the decoration of literary texts and the *Vienna Dioscurides* for the illustration of scientific works. In the early Byzantine tradition, the *Book of Genesis* was the most frequently illustrated text of the Old Testament due to the strong influence of Jewish art. Key examples include the *Vienna Genesis* and the *Cotton Genesis*. Parallel to this was the development of Gospels illustration, such as the *Rossano Gospel* and the fragments of *Sinope Gospels*. Following the victory of the iconodules, three significant psalters with marginal miniatures were created in the 9th century, i.e. the Chludov Psalter, Psalter Pantokrator 61 and Parisinus graecus 20. Production continued into the 10th (Codex Par. Gr. 139) and 11th century with the so-called "aristocratic" psalters and other works from the Studios Monastery. During the "Macedonian Renaissance" and through the 12th century, manuscript production flourished in Constantinople and the provinces, ultimately influencing the illustrated codices of Georgia and Armenia.

(Yorgos Archimandritis) The Reception of Byzantium in Modern and Contemporary Literature.

Comparative approaches: This course redefines Byzantium as a dynamic literary and cultural palimpsest, examining how the empire is continuously rewritten across modern narrative forms rather than remaining a fixed historical period. The curriculum traces the "Byzantine" through an intermedial lens that spans from the poetry of Yeats and Cavafy to contemporary video games. Students explore the "Modernist Recovery" of the empire as a spiritual sanctuary and investigate the "City Palimpsest" through the urban melancholy of contemporary novels and graphic narratives. The syllabus highlights the transformation of historical figures into dramatic archetypes and analyzes "Counterfeit Histories" where authors like Umberto Eco deconstruct imperial myths. Through the "Greek Synthesis" and the "Balkan Mirror," Byzantium is framed as a shared, yet sometimes contested, national or regional reference. The narrative arc concludes with "Byzantium Transfigured," exploring the "Space Byzantium" tropes in speculative fiction and the "Digital Neo-Byzantinism" found in global strategy games. Ultimately, the course bridges the gap between historical fact and the persistence of Byzantium as a transmedial literary myth and aesthetic system. Through this comparative approach, creators utilize historiographic metafiction to reveal how the empire's ritualistic power and "jeweled" aesthetics continue to haunt and inspire 21st-century global culture.

(Chrysostomos Stylios) Interactive Cultural Applications and Creative Computing for Byzantine Heritage:

This course introduces students to the design and development of interactive digital applications for the interpretation and communication of Byzantine cultural heritage within contemporary contexts such as museum education and cultural tourism. By integrating User Experience (UX) and User Interface (UI) design principles, it focuses on transforming historical content into engaging digital experiences. Students explore digital storytelling by combining narrative construction with game-based learning and scenario-based interaction design. They also utilize visual, block-based programming (Scratch) to prototype interactive projects, including digital narratives, interactive presentations of Byzantine monuments, and educational mini-games. The course also emphasizes critical evaluation practices, including usability testing, accessibility, and inclusive design,

as well as ethical considerations regarding authenticity and digital mediation of heritage. By completion, students will be equipped to design user-centered applications, apply storytelling techniques to cultural content, and critically evaluate digital representations using heuristic methods

(Ioannis Tsoulos) AI as a Research Partner in Byzantine Studies: This course introduces postgraduate students to the systematic and critical use of artificial intelligence tools in humanistic research, with a focus on Byzantine studies. Rather than surveying individual applications in isolation, the course is organized around the concrete problems that researchers encounter at every stage of their work: formulating research questions, locating and verifying sources, reading across large multilingual corpora, extracting and organizing information from primary and secondary material, evaluating the reliability of AI outputs, structuring research findings, and communicating scholarship to diverse audiences. For each problem, students learn to identify appropriate digital approaches, apply them practically using current tools, evaluate their outputs critically, and document their use transparently. A recurring theme throughout the course is the gap between AI confidence and AI accuracy (particularly on specialized historical content) and students develop a systematic methodology for detecting, classifying, and documenting AI failures as part of their research practice. The course culminates in a joint session with a guest Byzantine historian, where domain-specific failures across text, images, and structured data are demonstrated and analyzed using the analytical framework developed in preceding weeks. No technical background is required. All methods and tools are introduced through Byzantine examples drawn from the history, archaeology, philology, and material culture of the Byzantine world, with particular reference to the region of Arta and Epirus. Students complete the course with a documented mini research project designed to serve as direct groundwork for their diploma thesis.

(Petros Karvelis) Natural Language Processing for the Byzantine Corpus: This course introduces students of Byzantine Studies to the theory and practice of Natural Language Processing (NLP) through the systematic analysis of Byzantine Greek texts. Beginning from the foundations of corpus linguistics and computational thinking, students progressively acquire hands-on skills in Python programming, text preprocessing, morphological analysis, and corpus statistics, with constant reference to the particular challenges posed by Medieval Greek: polytonic Unicode encoding, orthographic variation, scribal conventions, and the heterogeneity of the surviving textual tradition. The course draws on major digital repositories of Byzantine texts as primary data sources. Core NLP tasks such as lemmatization, named entity recognition, text classification, and topic modelling are taught not as abstract algorithms but as tools applied directly to historical and philological research questions. Students learn to annotate Byzantine entities — persons, offices, toponyms, dynasties, dates — according to shared scholarly guidelines, and to train and evaluate machine learning models on the resulting datasets. The course closes with an introduction to knowledge graph construction and a critical engagement with large language models in the context of historical research. The final project consists of a named entity recognition pipeline applied to a Byzantine text of the student's choosing, integrating philological expertise with computational methods.

Academic Study Advisor

The Department of History and Archaeology implements the institution of the Academic Study Advisor, in accordance with the provisions of Law 4009/2011 (Government Gazette A' 195/06.09.2011, Article

35). This institution also operates within the PSP “Byzantine Studies via AI and Immersive Technologies,” aiming to provide substantive support to students throughout their studies.

The Academic Study Advisor guides and supports students in organizing their study, contributing to its effective and rational completion. In this context, students may approach the Advisor regarding issues concerning their studies, study organization methods, as well as prospects for further postgraduate studies in Greece or abroad. Additionally, the possibility of discussing personal matters is provided, insofar as these could affect their studies, such as difficulties related to attendance or participation in examinations. This support contributes to the continuous monitoring of students’ academic progress and the timely identification of potential academic difficulties, ensuring appropriate guidance and intervention where necessary.

Academic Advisors are appointed by the Coordinating Committee and maintain regular communication with students via email, beyond the predetermined office hours. If deemed necessary, meetings may also be organized via teleconference to ensure immediate and effective student support. This continuous communication framework ensures consistent academic guidance and reinforces the student-centred nature of the throughout the duration of studies.

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