UČNI NAČRT PREDMETA / COURSE SYLLABUS	
Predmet:	Prostorska arheologija – arheologija v prostoru. Metode in prakse raziskovanja prostora v arheologiji
Course title:	Spatial archaeology – archaeology in landscape. Methods of studying landscapes in archaeology

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Primerjalni študij idej in kultur, doktorski študij 3. stopnje	Tisočletja med Jadranom in Podonavjem	Brez letnika	/
Comparative studies of ideas and cultures, doctoral study 3rd level	Millenia between the Adriatic and the Danube	Not specified	/

Vrsta predmeta / Course type	splošno izbirni / general elective
Univerzitetna koda predmeta / University course code:	82

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Klinične vaje work	Druge oblike študija	Samost. delo Individ. work	ECTS
60	30				90	6

Nosilec predmeta / Lecturer:	Doc. dr. Benjamin Štular
Jeziki / Languages: Predavanja / Lectures:	slovenščina, angleščina / Slovenian, English
Vaje / Tutorial:	/

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:	**Prerequisits:**
Ni posebnih pogojev.	None required.

Vsebina:	**Content (Syllabus outline):**
Pregled stanja raziskav • pregled relevantnih teoretskih izhodišč • pregled relevantnih metod dela Digitalna arheologija • spletni viri relevantnih podatkov daljinskega zaznavanja • spletna orodja za analizo podatkov daljinskega zaznavanja • druga orodja digitalne arheologije Lidarski podatki in druge metode daljinskega zaznavanja • delo s podatki laserskega skeniranja Slovenije • delo z drugimi podatki daljinskega zaznavanja • arheološka interpretacija podatkov	State-of-the-art • an overview of current theories • an overview of current methods Digital archaeology • web sources of relevant remote sensing data • web tools for analysis of remote sensing data • other tools in digital archaeology Lidar and other remote sensing data • working with airborne laser scanning data • working with other remote sensing data • archaeological interpretation of data

Temeljni literatura in viri / Readings:

Teorija in metode

- Ashmore, W., Knapp, B. A. (ur.) 1999, Archaeologies of Landscape: Contemporary Perspectives.

Malden, Oxford.
- Aston, M. 1985, Interpreting the Landscape: Landscape Archaeology and Local History. London, New York.
- Bender, B., Winer, M. (ur.) 2001, Contested Landscapes: Movement, Exile and Place. Oxford, New York.
- Chapman, H. 2006, Landscape Archaeology and GIS. Stroud.
- David, B., Thomas, J. (ur.) 2008, Handbook of Landscape Archaeology. Walnut Creek.
- Clark, J., Darlington, J., Fairclough, G. 2004, Using Historic Landscape Characterisation. English Heritage's review of HLC Applications 2002 – 03. London.
- Doneus, M. 2013, Die hinterlassene Landschaft. Prospektion und Interpretation in der Landschaftsarchäologie. Wien.
- Garmy, P. 2012, Villes, réseaux et systèmes de villes. Contribution de l'archéologie. Paris, Arles.
- Hooke, D. 1997, The Landscape of Anglo-Saxon England. London, New York.
- Howard, P. 2006, Archaeological Surveying and Mapping. Recording and depicting the landscape. London, New York.
- Kuna, M. 2004, Nedestruktivní archeologie. Teorie, metody a cíle. Plzen.
- Lodewijckx, M., Pelegrin, R. (ur.) 2011, A Wew from the Air: Aerial Archaeology and Remote Sensing Techniques. Results and opportunities. Oxford.
- Muir, R. 2004, Landscape Encyclopedia. Macclesfield.
- Olsen, B. 2002, Od predmeta do teksta. Beograd.
- Opitz, R. S., Cowley, D. C. (ur.) 2013, Interpreting Archaeological Topography. Airborne Laser Scanning, 3D Data and Ground Observation. Oxford.
- Parcak, S. H. 2009, Satellite remote sensing for archaeology. London, New York.
- Johnson, M. 2007, Ideas of Landscape. Malden, Oxford, Carlton.
- Sarris, A. (ur.) 2015, Best Practices of GeoInformatic Technologies for the Mapping of Archaeolandscapes. Oxford.
- Tilley, C. 2004, The materiality of stone: explorations in landscape phenomenology 1. Oxford, New York.
- Trigger, B. G. 1967, Settlement Archaeology. Its Goals and Promise, American Antiquity 32 (2), 149-160.
- Ucko, P. J., Layton, R. (ur.) 1999, The Archaeology and Anthropology of Landscape: Shaping your landscape. London, New York.
- Wiseman, J., El-Baz, F. (ur.) 2007, Remote Sensing in Archaeology. New York.

Slovenija
- Badjura, R. 1953, Ljudska geografija: Terensko izrazoslovje. Ljubljana.
- Gams, I. 1974, Kras. Zgodovinski, naravoslovni in geografski oris. Ljubljana.
- Ilešič, S. 1950, Sistemi poljske razdelitve na Slovenskem. – SAZU, Ljubljana.
- Mlekuž, D. 2013, Skin Deep: LiDAR and Good Practice ofLandscape Archaeology. V: C. Corsi, B. Slapšak, F. Vermeulen (ur.), Good Practice in Archaeological Diagnostics. Non-invasive Survey of Complex Archaeological Sites, 113-131.
- Novaković, P. 2003, Osvajanje prostora: razvoj prostorske in krajinske arheologije. Ljubljana.
- Pleterski, A. 2011, Župa Bled. Nevidna srednjeveška Evropa. Ljubljana.
- Slapšak, B. 1995, Možnosti študija poselitve v arheologiji. Ljubljana.
- Štular, B. 2011, The use of lidar-derived relief models in archaeological topography. The Kobarid region (Slovenia) case study (Uporaba modelov reliefa pridobljenih z lidarskim snemanjem v arheološki topografiji. Študijski primer Kobariške), Arheološki vestnik = Acta archaeologica 62, 393-432.

- Štular, B., Kokalj, Ž., Oštir, K., Nuninger, L. 2012, Visualization of lidar-derived relief models for detection of archaeological features, Journal of Archaeological Science 39 (11), 3354–3360.
- Štular, B. , Lozić, E. 2016, Primernost podatkov projekta Lasersko skeniranje Slovenije za arheološko interpretacijo: metoda in študijski primer. V: R. Ciglič, M. Geršič, D. Perko, M. Zorn (ur.), Digitalni podatki, Ljubljana, 157-166.
- Štular, B. (ur./ed.) 2020, Srednjeveški Blejski otok v arheoloških virih = Medieval archaeology of Bled Island. Opera Instituti archaeologici Sloveniae 42, Ljubljana.

Cilji in kompetence:

Raziskovanje prostora v arheologiji ima več stoletno zgodovino. Razvoju zadnjega pol stoletja lahko sledimo že po uporabi različnih izrazov: poselitvena arheologija, prostorska arheologija, naselbinska arheologija in arheologija krajin. Vsak izraz opisuje preplet teoretskih izhodišč in metodoloških orodij, ki skupaj tvorijo "šolo" oziroma arheološko prakso. V zadnjih desetletjih razvoj vede ne temelji več na teoretskih in metodoloških premikih temveč na tehnološkem razvoju. Ta je na točki, ko je raziskovalcu dostopna ogromna količina podatkov v poljubnem merilu in zato so meje med prostorskimi arheologijami (npr. arheologijo krajin) in osredotočenimi raziskavami (npr. posamezno najdišče) vse bolj zabrisane. Zato dandanes lahko upravičeno govorimo o arheologiji v prostoru.

Študenti in študentke predmeta Prostorska arheologija – arheologija v prostoru bodo preučili najpomembnejše arheološke prakse raziskovanja prostora s poudarkom na relevantnih modernih metodah, ki jih obeležujeta predvsem digitalna arheologija in t. i. lidarski podatki (skupaj z ostalimi metodami daljinskega zaznavanja). Prva omogoča dostop in analizo ogromne količine raznorodnih podatkov. Lidarski podatki oziroma podatki zračnega laserskega skeniranja pa imajo potencial, da prinesejo količino novih arheoloških podatkov primerljivo z delom cele generacije slovenskih arheologov, ki si je spomenik postavila z izdajo Arheoloških najdišč Slovenije.

Študenti in študentke bodo s študijem objav in predvsem s praktičnim delom z izbranimi metodami digitalne arheologije in/ali daljinskega zaznavanja pridobili kompetence za samostojno izvedbo arheološke analize v

Objectives and competences:

The study of landscapes has a venerable tradition in archaeology. The changing approaches towards the subject in the last decades can be discerned by the use of phrases, such as settlement archaeology, spatial archaeology, siedlungsarchaeologie and landscape archaeology. Each term describes a combination of theoretical stances and methods applied and each formed a specific archaeological practice. In the last two decades the progress is no longer grounded in theoretical or methodological advancement but rather on the availability of ever-new technologies. Nowadays, technology makes vast amount of data available for research ranging from micro (e.g. a site) to macro scale (e.g. a region). Therefore, the boundaries between archaeology of a site and landscape archaeology are more and more blurred into one and the result can be described as the archaeology in landscape.

Students will revise the most important archaeological practices of studying landscapes in archaeology. The focus will be on the relevant contemporary approaches that are signified foremost by digital archaeology and so called lidar data (i.e. airborne laser scanning data) in conjunction with other remote sensing methods. The first enables an access to a vast quantity of data. The second has the potential to bear in a few years time an amount of new archaeological data that can be compared to the work of an entire generation of archaeologists that gave us the Archaeological sites of Slovenia catalogue (ANSL).

Both by revising the literature and by practical exercises in selected digital archaeology and/or remote sensing techniques the students will acquire competence to implement an archaeological analysis in landscape.

prostoru.	

Predvideni študijski rezultati:	Intended learning outcomes:
Predvideni študijski rezultat je samostojna pisna naloga v obliki znanstvenega članka.	Intended learning outcome is a written paper in the form of a scientific article.

Metode poučevanja in učenja:	Learning and teaching methods:
Oblike dela: ☐Frontalna oblika poučevanja ☐Delo v manjših skupinah oz. v dvojicah ☒Samostojno delo študentov ☒ e-izobraževanje **Metode (načini) dela:** ☐Razlaga ☒Razgovor/ diskusija/debata ☒Delo z besedilom ☒Proučevanje primera ☐Igra vlog ☐Druge vrste nastopov študentov ☐Reševanje nalog ☐"Terenske vaje" (npr. obiski podjetij) ☐Vključevanje gostov iz prakse	**Types of learning/teaching:** ☐Frontal teaching ☐Work in smaller groups or pair work ☒Independent students work ☒ e-learning☐ **Teaching methods:** ☐Explanation ☒Conversation/discussion/debate ☒Work with texts ☒Case studies ☐Roleplay ☐Different presentation ☐Solving exercises ☐Field work (e.g. company visits) ☐Inviting guests from companies

Načini ocenjevanja:	Delež (v %) / Weight (in %)	Assessment:
Krajši pisni izdelki		Short written assignments
Daljši pisni izdelki	70	Long written assignments
Javni nastop ali predstavitev	20	Presentations
Končno ocenjevanje (pisni/ustni izpit)	10	Final examination (written/oral)
Drugo		Other

Reference nosilca / Lecturer's references:

- ŠTULAR, Benjamin, Srednjeveški Blejski otok v arheoloških virih = Medieval Archaeology of Bled Island (Opera Instituti archaeologici Sloveniae, 42). Ljubljana: Inštitut za arheologijo ZRC SAZU: ZRC Publishing.
- ŠTULAR, Benjamin, EICHERT, Stephan, Hilltop sites with Early Medieval military finds in Eastern Alpine Area. Reverse engineering of predictive modelling. In: K. Winckler, M. Diesenberger, S. Eichert (eds.), Der Ostalpenraum Im Frühmittelalter --Herrschaftsstrukturen, Raumorganisation Und Archäologisch-Historischer Vergleich, Wien, 233-251. Comment: new methods in the field of GIS in archaeology. Preprint: http://iza.zrc-sazu.si/pdf/Stular/2019_Stular_Preprint.pdf
- ŠTULAR, Benjamin, One phenomena or many? Considerations on the role of selected sites in Slovenia: Na Bleku, Mali grad, and Gradišče above Bašelj. In: K. Winckler, M. Diesenberger, S. Eichert (eds.), Der Ostalpenraum Im Frühmittelalter --Herrschaftsstrukturen, Raumorganisation Und Archäologisch-Historischer Vergleich, Wien, 215-232. Comment: aLiDAR is integrated into a research of Early Medieval site. Preprint: http://iza.zrc-sazu.si/pdf/Stular/2019_Stular_Preprint.pdf

- ŠTULAR, Benjamin, ŠTUHEC, Seta 2015. 3D archaeology: early Medieval earrings from Kranj. iTunes, ZRC Publishing, Ljubljana. Comment: scientific monograph book is exploring the publishing format for 3D data. Preprint: http://iza.zrc-sazu.si/pdf/Stular/3D_Archaeology_master.pdf
- ŠTULAR, Benjamin (ed.), (authors: Štular, Benjamin and Rihter, Jernej and Vojaković, Petra and Klasinc, Rok and Vintar, Anja and Toškan, Borut and Tolar, Tjaša and Verbič, Tomaž and Gutman, Maja) 2015. Smlednik Castle. - E-Monographiae Instituti Archaeologici Sloveniae 8, ZRC Publishing. Comment: aLiDAR is integrated into a research of Medieval castle. Link: https://iza2.zrc-sazu.si/sites/default/files/smlednik.pdf
- ŠTULAR, Benjamin, OŠTIR, Krištof, NUNINGERA, Laure in KOKALJ, Žiga 2012, Visualization of lidar-derived relief models for detection of archaeological features, Journal of Archaeological Science 39, 2012, 3354-3360. Comment: important methodological study in aLiDAR. Citations: WoS 48, Scopus 47, Google scholar 81 Preprint: http://iza.zrc-sazu.si/pdf/Stular/YJASC_3284.pdf
- ŠTULAR, Benjamin: invited lecture Regional pottery dating: [Mittelalterarchäologie in Österreich - eine Bilanz", Atrium, Zentrum für Alte Kulturen un Burg Hasegg, Hall in Tirol, 2.-6.X.2012]. Innsbruck, 2012. [COBISS.SI-ID 35032621]
- ŠTULAR, Benjamin. The use of lidar-derived relief models in archaeological topography: the Kobarid region (Slovenia) case study. Arheološki vestnik, 2011, 62, pp. 393-432. Citations: WoS 48, Scopus 47, Google scholar 81 Comment: an early methodological study in aLiDAR. Citations: WoS 4, Scopus 4, Google scholar 6 Link: http://av.zrc-sazu.si/pdf/62/AV_62_2011_Stular.pdf
- ŠTULAR, Benjamin: keynote speaker Lidar data and landscape archaeology: a Kobarid (Slovenia) in 4th and 6th c. AD case study: predavanje na posvetovanju "Formation et recherche pour l'interprétation archéologique des données Lidar = Training and Research on the Archaeological Interpretation of Lidar: TRAIL 2011", Parc archéologique - centre archéologique européen - Bibracte en Bourgogne, Glux-en-Glen (F) , 14.-16. mar. 2011. [COBISS.SI-ID 33236525] Comment: TRAIL is the biggest scientific Comment: an early methodological study in aLiDAR.