

Priloga 1 k Vlogi za akreditacijo krajšega izobraževanja in usposabljanja za pridobitev mikrodokazila – Učni načrt mikrodokazila
Enclosure 1 to the application for accreditation of short-term learning and training course
for the acquisition of micro-credentials – Micro-credential Syllabus

UČNI NAČRT MIKRODOKAZILA/MICRO-CREDENTIAL SYLLABUS

Naziv mikrodokazila:

Micro-credential title:

Večnamenski materiali na biološki osnovi
Bio-based Multipurpose Materials

Študijsko področje po KLASIUS P-16

Study field according to KLASIUS P-16:

072

Razvrstitev v SOK: *SQF Classification in*

Razvrstitev v EOVK: *QF-EHEA Classification*

Razvrstitev v EOK: *EQF Classification*

7

1 stopnja

6

Univerzitetna koda/University code:

Način izvedbe (klasično, hibridno, na daljavo)

Method of implementation (classic, hybrid, online)

klasično

classic

Predavanja <i>Lectures</i>	Seminar <i>Seminar</i>	Vaje <i>Tutorial</i>	Klinične vaje <i>Clinical work</i>	Druge oblike študija <i>Other forms of study</i>	Samostojno delo <i>Individual work</i>	ECTS
6		6			18	1

Nosilec predmeta/Lecturer:

(So)izvajalci/(Co)-Lecturers:

Assist. Prof. Dr. Mohammad Derikvand

Jezik izvedbe

Language of instruction

Angleščina

English

Maksimalno število udeležencev

Maximum number of participants:

15

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Merila za izbor udeležencev v primeru večjega interesa od razpisanih mest:

Criteria for selecting participants in the event of greater interest than the number of places available:

Datum prijave

Date of application

Pogoji za vključitev:

Delavci in študenti v gradbenem ekosistemu

Prerequisites:

Construction ecosystem workers and students

Vsebina:

Uvod v bio-gospodarstvo,
Multidisciplinarna vrednostna veriga,
Proizvodnja bioosnovanih materialov,
Obdelava lesa v kontekstu bioosnovanosti,
Prihodnje perspektive in novi trendi.

Content (Syllabus outline):

Overview
Introduction to the Bio-Based Economy
Multidisciplinary Value Chain
Biobased Materials Production
Wood Treatments in the Biobased Context
Future Perspectives and Emerging Trends

Literatura in viri/Readings:

Znanstveni članki in uradna poročila, ki promovirajo bioosnovane izdelke, materiale in bio-gospodarstvo / Scientific articles and official reports promoting biobased products, materials and bioeconomy.

Druge pomembne sestavine (npr. licence, orodja, pripomočki ipd.):

Other important components (e.g. licenses, tools, utilities, etc.):

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Cilji in kompetence:

Izkaže razumevanje okoljskih koristi, povezanih z uporabo bioosnovanih materialov.

Pojasni pozitivne prispevke bioosnovanih materialov k razvoju trajnostne družbe.

Ocenjuje različne metode in tehnologije, vključene v proizvodnjo bioosnovanih materialov.

Objectives and competences:

Demonstrate an understanding of the environmental benefits associated with the use of biobased materials.

Explain the positive contributions of biobased materials to the development of a sustainable society.

Evaluate the diverse methods and technologies involved in the production of biobased materials.

Predvideni učni izidi:

Znanje in razumevanje:

Poznavanje bioosnovanih materialov.

Sposobnost za analizo, sintezo in predvidevanje rešitev ter njihovih posledic konkretnih problemov z uporabo znanstvenih metod.

Uporaba in refleksija:

Spoznavanje in razumevanje bioosnovanih materialov, uglasenosti med teorijo in njeno aplikacijo na konkretnih primerih.

Avtonomnost, (samo)kritičnost, (samo)refleksivnost.

Prenos naučenih principov na načrtovanje obsežnih realnih sistemov. Sposobnost pridobivanja, selekcije in ocenjevanje novih informacij in zmnožnost ustrezne interpretacije v kontekstu.

Sposobnost za upravljanje s časom, za samo pripravo in načrtovanje ter samokontrolo izvajanja postopkov.

Sposobnost timskega dela.

Intended learning outcomes:

Knowledge and understanding:

Expertise in biobased materials. The ability for analysis, synthesis and anticipation of solutions and their consequences for target problems using the scientific methodology.

Use and reflection:

Understanding and recognizing the importance of biobased materials, the harmony between theory and its application to concrete examples. Autonomy, (self)criticism, (self-reflection. Transfer of learned principles to the design of large-scale real systems. Ability to acquire, select, and evaluate new information and the capacity for appropriate interpretation in context.

Ability to manage time, self-preparation and planning, and self-monitoring of process execution. The ability to work in a team.

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Metode učenja in poučevanja

Oblike dela: • predavanja • vaje • samostojno delo Metode dela: razlaga, dialog, diskusija, problemsko učenje, študije primerov
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Learning and teaching methods:

Forms of teaching: • lectures • exercises • individual work Teaching methods: explanation, debates, discussion, problem-based learning, case studies

Način preverjanja in ocenjevanja:

Type of examination and assessment:

Način (pisni izpit, ustni izpit, naloge, idr.)	Delež (v %): <i>Weight (in %)</i>	<i>Type (written exam, oral exam, assignments, etc.)</i>
Projektna naloga	100%	Project assignment

Pogoji za pridobitev mikrodokazila:

Minimal standards for obtaining micro-credential:

Udeleženec mora obiskovati usposabljanje in oddati ustrezno projektno nalogo.	The participant must attend the training and submit the relevant project assignment.
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Reference nosilca/Lecturer's references:

Vodenje projekta:

HORIZON-EcoDLT-101180622 Ponoven življenjski cikel odsluženega lesa z izdelavo lesenih mozničnih sten (EcoDLT), 1.9.2024 - 31.8.2026.

Izvirni znanstveni članki:

1. DERIKVAND, Mohammad, BURNARD, Michael David, BAZYAR KHOSHROODI, Donya, BARBIČ, Rok, VOUK, Marko, KUTNAR, Andreja. Size effect on bending strength and failure modes of finger-jointed timber. Results in engineering. Dec. 2025, vol. 28, [article no.] 108208, str. 1-12, ilustr. ISSN 2590-1230.
<https://www.sciencedirect.com/science/article/pii/S2590123025042549?via%3Dihub>, DOI: 10.1016/j.rineng.2025.108208.
2. HAN, Lei, DERIKVAND, Mohammad, SANDAK, Jakub Michal, HLADNIK, Martin, SANDBERG, Dick, KUTNAR, Andreja. Push-out resistance of threaded wooden dowels in cross-laminated timber with hardwood cross-layer. Wood Material Science & Engineering. 2025, vol. 20, iss. 5, str. 1122-1127, ilustr. ISSN 1748-0272.
<https://www.tandfonline.com/doi/full/10.1080/17480272.2025.2488964>, DOI: 10.1080/17480272.2025.2488964.
3. DERIKVAND, Mohammad, FINK, Gerhard. Bending properties of deconstructable cross-laminated timber-concrete composite floor elements. Wood Material Science & Engineering. 2022, vol. 17, iss. 4, str. 253-260, ilustr. ISSN 1748-0272.
<https://doi.org/10.1080/17480272.2022.2077658>,
<https://www.tandfonline.com/doi/full/10.1080/17480272.2022.2077658>, DOI: 10.1080/17480272.2022.2077658.
4. DERIKVAND, Mohammad, HOSSEINZADEH, Serveh, FINK, Gerhard. Mechanical properties of dowel laminated timber beams with connectors made of salvaged wooden materials. Journal of architectural engineering. Print ed. 2021, vol. 27, iss. 4, str. 1-9, ilustr. ISSN 1076-0431.
<https://ascelibrary.org/doi/10.1061/%28ASCE%29AE.1943-5568.0000513>,
[https://doi.org/10.1061/\(ASCE\)AE.1943-5568.0000513](https://doi.org/10.1061/(ASCE)AE.1943-5568.0000513), DOI: 10.1061/(ASCE)AE.1943-5568.0000513.