Univerza v Mariboru
University of Maribor

Fakulteta za naravoslovje in matematiko / Faculty of Natural Sciences and Mathematics

OPIS PREDMETA / SUBJECT SPECIFICATION	
Predmet:	Kemija materialov
Subject Title:	Chemistry of materials

Študijski program Study programme	Študijska smer Study field	Letnik Year	Semester Semester
Izobraževalna kemija Educational Chemistry		3	**Zimski** **Autumn**

Univerzitetna koda predmeta / University subject code:

Predavanja Lectures	Seminar Seminar	Sem. vaje Tutorial	Lab. Vaje Lab. Work	Teren. vaje Field work	Samost. delo Individ. work	ECTS
20		10			150	**6**

Nosilec predmeta / Lecturer: Miha Drofenik, Peter Krajnc

Jeziki / Languages:	**Predavanja / Lecture:**	slovenski / Slovenian
	Vaje / Tutorial:	slovenski / Slovenian

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:	**Prerequisites:**
Znanje splošne, anorganske in organske kemije.	Knowledge of general, inorganic and organic chemistry.

Vsebina:	**Contents (Syllabus outline):**
• Keramika in steklo • Polprevodniki in ionski prevodniki • Kovinski materiali • Naravni polimeri • Sintetični polimeri	• Ceramics and glasses • Semiconductors and ion conductors • Metallic materials • Natural polymers • Synthetic polymers

Temeljni študijski viri / Textbooks:

1. W. D. Kingery, H. K. Bowen, D. R. Uhlmann, Introduction to Ceramics, John Wilay & Sons (1975)
2. K.J. Rao, Structural Chemistry of Glasses, Elsevier (2002)
3. B. J. Hunt, M.I. James (Eds.): Polymer Characterisation, Chapman and Hall, Glasgow, 1993

Cilji:	**Objectives:**
Namen predmeta je, da pridobi kandidat osnovno uporabno znanje za razvoj in raziskave anorganskih in organskih materialov. Slušatelji se bodo seznanili s specifičnimi lastnostmi pomembnih skupin anorganskih materialov ter spoznali njihovo uporabnost v tehniki in medicini..	The focus of the course is to acquire basic knowledge of inorganic and organic materials for it's development and fundamental research. Emphasis is given to learn the specific properties of important classes of inorganic materials and their applicability in technique and medicine.

Predvideni študijski rezultati: **Intended learning outcomes:**

Znanje in razumevanje: Kandidat bo dobil temeljno in praktično znanje s področja pomembnih skupin anorganskih materialov uporabnih v tehniki in biomedicini. Prenesljive/ključne spretnosti in drugi atributi:	Knowledge and Understanding: The candidate will be acquainted with the basic conception of some important classes of inorganic materials which can be used in technique and medicine. Transferable/Key Skills and other attributes:

Metode poučevanja in učenja: **Learning and teaching methods:**

Predavanja, seminarsko delo, laboratorijske vaje.	Lectures, seminar work, laboratory experiments.

Načini ocenjevanja:	Delež (v %) / Weight (in %)	**Assessment:**
Pisni izpit (ali kolokviji) Ustni izpit	60 40	Written exam (or partial exams) Oral exam

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Materialni pogoji za izvedbo predmeta : ***Material conditions for subject realization***

• *Predavalnica* • *Laboratorij*	• *Lecture hall* • *Laboratory*

Obveznosti študentov: ***Students' commitments:***

(pisni, ustni izpit, naloge, projekti)	*(written, oral examination, coursework, projects):*
• Pisni izpit • Ustni izpit	• Written exam (or partial exams) • Oral exam