

Medicinski fakultet u Rijeci

**IZVEDBENI NASTAVNI PLAN  
2022/2023**

Za kolegij

**Additive Technology**

Studij:	<b>Medical Studies in English (R)</b> (izborni) Sveučilišni integrirani prijediplomski i diplomski studij
Katedra:	<b>Centar za biomodeliranje i inovacije u medicini</b>
Nositelj kolegija:	<b>izv. prof. dr. sc. Maričić Sven</b>
Godina studija:	<b>3</b>
ECTS:	<b>1.5</b>
Stimulativni ECTS:	<b>0 (0.00%)</b>
Strani jezik:	<b>Mogućnost izvođenja na stranom jeziku</b>

## **Podaci o kolegiju:**

Application of new technologies in biomedicine. Historical development of technology. Digital production of personalized medicine products. Development of additive technologies. Manufacturing applications. Input materials for high-precision technologies - photopolymers. The concept and application of various systems that are most commonly used today, such as stereolithography (SL/SLA), selective laser sintering (SLS), fused deposition modeling (FDM), 3D printing (eng. 3D printing - 3DP), lamination (eng. laminated object manufacturing - LOM), hybrid process - combination of SLA and 3DP (PolyJet).

## **Popis obvezne ispitne literature:**

- Gibson I., Rosen D., Stucker B., Khorasani M.: Additive Manufacturing Technologies, 2021, ISBN: 978-3030561260
- Wimpenny D., I., Pandey P., M.: Advances in 3D Printing & Additive Manufacturing Technologies, 2016, ISBN: 978-9811008115
- Kalaskar D., M.: 3D printing in Medicine, 2017, ISBN: 978-0081007174
- Zhang L., G., Fisher J., P., Leong K.: 3D Bioprinting and Nanotechnology in Tissue Engineering and Regenerative Medicine, Elsevier 2015, ISBN: 978-0128005477

## **Popis dopunske literature:**

- Chua C., K., Yeong W., Y.: Bioprinting: Principles and Applications (Wspc Book Series in 3D Printing), World Scientific Publishing Company 2015, ISBN: 978-9814612104
- Atala A., Yoo J., J.: Essentials of 3D Biofabrication and Translation 1st Edition, Academic Press 2015, ISBN: 978-0128009727

## **Nastavni plan:**

### **Obveze studenata:**

Regular attendance at classes, writing a seminar paper.

### **Ispit (način polaganja ispita, opis pisanog/usmenog/praktičnog dijela ispita, način bodovanja, kriterij ocjenjivanja):**

### **Ostale napomene (vezane uz kolegij) važne za studente:**

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## **SATNICA IZVOĐENJA NASTAVE 2022/2023**

Additive Technology

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### **Popis predavanja, seminara i vježbi:**

### **ISPITNI TERMINI (završni ispit):**

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