Detaljni izvedbeni plan

Akademska godina: 2026/2027	**Semestar:** Zimski
Godina studija: 2	**Studij:** Psihologija (R) (izborni) (Prijediplomski)

I. OSNOVNI PODACI O KOLEGIJU

Naziv kolegija: Epigenetics in Psychology	
Kratica kolegija: IZBP252	
ECTS bodovi: 3	**Šifra kolegija:** 287932
Preduvjeti za upis kolegija: Nema	
Ukupno opterećenje kolegija	
Vrsta nastave	**Ukupno sati**
Predavanje	15
Seminar	15
Mjesto i vrijeme održavanja nastave: HKS – prema objavljenom rasporedu	

II. NASTAVNO OSOBLJE

Nositelj kolegija	
Ime i prezime: Štefulj Jasminka	
Akademski stupanj/naziv:	**Izbor:** redoviti profesor
Kontakt e-mail: jasminka.stefulj@unicath.hr	**Telefon:**
Konzultacije: Prema objavljenom rasporedu	
Suradnici na kolegiju	
Ime i prezime: Žutić Maja	
Akademski stupanj/naziv:	**Izbor:** viši asistent - predavač
Kontakt e-mail: maja.zutic@unicath.hr	**Telefon:**
Konzultacije: Prema objavljenom rasporedu	

III. DETALJNI PODACI O KOLEGIJU

Jezik na kojem se nastava održava: English

Opis kolegija	*This course introduces the processes through which environmental influences become biologically embedded and shape behavior. It provides an overview of key concepts in genetics and epigenetics and examines how environmental factors and life experiences influence development, mental health, and psychopathology through epigenetic mechanisms. The course also introduces key research methods in behavioral epigenetics and develops students' ability to critically evaluate current research in this field.*
Očekivani ishodi učenja na razini kolegija	Students will be able to: explain and discuss the implications of epigenetics for psychology; describe key epigenetic mechanisms and explain how they contribute to behavior and mental health disorders; describe research designs and methods used in behavioral epigenetics and comment on their advantages and limitations; present a selected topic in behavioral epigenetics and critically evaluate current research in the field.
Literatura	
Obavezna	Moore, D. S. (2015). The Developing Genome: An Introduction to Behavioral Epigenetics (1st ed.). Oxford University Press
Dopunska	◦ Montel Hayes, R., Mason, C. E., & Miller, J. J. (2025). The clinical use of epigenetics in psychiatry: a narrative review of epigenetic mechanisms, key candidate genes, and precision psychiatry. *Frontiers in Psychiatry*, 16, 1671122. https://doi.org/10.3389/fpsyt.2025.1671122 ◦ Smeeth, D., Beck, S., Karam, E. G., & Pluess, M. (2021). The role of epigenetics in psychological resilience. *The Lancet Psychiatry*, 8(7), 620–629. https://doi.org/10.1016/S2215-0366(20)30515-0 ◦ Aristizabal, M. J., Anreiter, I., Halldorsdottir, T., Odgers, C. L., McDade, T. W., Goldenberg, A., Mostafavi, S., Kobor, M. S., Binder, E. B., Sokolowski, M. B., & O'Donnell, K. J. (2020). Biological embedding of experience: A primer on epigenetics. *Proceedings of the National Academy of Sciences of the United States of America*, 117(38), 23261–23269. https://doi.org/10.1073/pnas.1820838116 ◦ Gottschalk, M. G., Domschke, K., & Schiele, M. A. (2020). Epigenetics Underlying Susceptibility and Resilience Relating to Daily Life Stress, Work Stress, and Socioeconomic Status. *Frontiers in Psychiatry*, 11, 163. https://doi.org/10.3389/fpsyt.2020.00163 ◦ Kraaijenvanger, E. J., He, Y., Spencer, H., Smith, A. K., Bos, P. A., & Boks, M. P. M. (2019). Epigenetic variability in the human oxytocin receptor (OXTR) gene: A possible pathway from early life experiences to psychopathologies. *Neuroscience and Biobehavioral Reviews*, 96, 127–142. https://doi.org/10.1016/j.neubiorev.2018.11.016 ◦ Liberman, N., Wang, S. Y., & Greer, E. L. (2019). Transgenerational epigenetic inheritance: from phenomena to molecular mechanisms. *Current Opinion in Neurobiology*, 59, 189–206. https://doi.org/10.1016/j.conb.2019.09.012 ◦ Moore D. S. (2017). Behavioral epigenetics. Wiley interdisciplinary reviews. Systems Biology and Medicine, 9(1), 10.1002/wsbm.1333. https://doi.org/10.1002/wsbm.1333 ◦ Lester, B. M., Conradt, E., & Marsit, C. (2016). Introduction to the Special Section on Epigenetics. *Child Development*, 87(1), 29–37. https://doi.org/10.1111/cdev.12489 ◦ Bale T. L. (2015). Epigenetic and transgenerational reprogramming of brain development. *Nature Reviews Neuroscience*, 16(6), 332–344. https://doi.org/10.1038/nrn3818 ◦ Babenko, O., Kovalchuk, I., & Metz, G. A. (2015). Stress-induced perinatal and transgenerational epigenetic programming of brain development and mental health. *Neuroscience and Biobehavioral Reviews*, 48, 70–91. https://doi.org/10.1016/j.neubiorev.2014.11.013

Način ispitivanja i ocjenjivanja		
Polaže se DA	**Isključivo kontinuirano praćenje nastave** NE	**Ulazi u prosjek** DA
Preduvjeti za dobivanje potpisa i polaganje završnog ispita	Regular attendance of classes (at least 70% attendance); Fulfillment of seminar obligations; At least 35 points from teaching activities (two colloquiums and seminar).	

Način ocjenjivanja	excellent (5) - 90 to 100 points very good (4) - 80 to 89.9 points good (3) - 65 to 79.9 points pass (2) - 50 to 64.9 points insufficient (1) - 0 to 49.9 points
Način polaganja ispita	Achieving points: 1st colloquium 25 points, 2nd colloquium 25 points, seminar 20 points, and final oral exam 30 points.

Detaljan prikaz ocjenjivanja unutar Europskoga sustava za prijenos bodova

ACTIVITY TYPE	ECTS Student Workload Coefficient	GRADE PERCENTAGE (%)
Class Attendance	0.80	0
Seminar Presentation	0.44	20
Midterm Exam	0.55	25
Midterm Exam	0.55	25
Total in Class	2.34	**70**
Final Exam	0.66	30
TOTAL ECTS (Classes + Final Exam)	3.00	**100**

IV. TJEDNI PLAN NASTAVE

Predavanja

#	Tema
1	Biology and behavior: introductory lecture
2	Introduction to genetics: genotype, phenotype, environment
3	Foundations of modern genetics

4	Gene expression and regulation
5	The emergence of epigenetics
6	1st colloquium
7	DNA methylation and other epigenetic mechanisms
8	Epigenetic reprogramming
9	Epigenetics and the prenatal environment
10	Experience-dependent epigenetic changes
11	Epigenetic mechanisms in psychopathology
12	Transgenerational epigenetic inheritance
13	Research methods in behavioral epigenetics
14	2nd colloquium
15	Epigenetics in psychology: implications and concluding remarks
Seminari	
#	**Tema**
1	Introduction to seminars
2	Seminars related to the lecture topic
3	Seminars related to the lecture topic
4	Seminars related to the lecture topic
5	Seminars related to the lecture topic
6	1st colloquium
7	Seminars related to the lecture topic
8	Seminars related to the lecture topic
9	Seminars related to the lecture topic
10	Seminars related to the lecture topic
11	Seminars related to the lecture topic
12	Seminars related to the lecture topic
13	Seminars related to the lecture topic
14	2nd colloquium
15	Final discussion