



Detaljni izvedbeni plan

Akadska godina:

2026/2027

Semestar:

Zimski

Studij:

Psihologija (R) (izborni)

Godina studija:

1

I. OSNOVNI PODACI O KOLEGIJU

Naziv kolegija: Epigenetics in Psychology

Kratika 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. <i>Frontiers in Psychiatry</i>, 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. <i>The Lancet Psychiatry</i>, 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. <i>Proceedings of the National Academy of Sciences of the United States of America</i>, 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. <i>Frontiers in Psychiatry</i>, 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. <i>Neuroscience and Biobehavioral Reviews</i>, 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. <i>Current Opinion in Neurobiology</i>, 59, 189–206. https://doi.org/10.1016/j.conb.2019.09.012 ◦ Moore D. S. (2017). Behavioral epigenetics. <i>Wiley interdisciplinary reviews. Systems Biology and Medicine</i>, 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. <i>Child Development</i>, 87(1), 29–37. https://doi.org/10.1111/cdev.12489 ◦ Bale T. L. (2015). Epigenetic and transgenerational reprogramming of brain development. <i>Nature Reviews Neuroscience</i>, 16(6), 332–344. https://doi.org/10.1038/nnrn3818 ◦ Babenko, O., Kovalchuk, I., & Metz, G. A. (2015). Stress-induced perinatal and transgenerational epigenetic programming of brain development and mental health. <i>Neuroscience and Biobehavioral Reviews</i>, 48, 70–91. https://doi.org/10.1016/j.neubiorev.2014.11.013		
Način ispitivanja i ocjenjivanja			
Polaze 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.
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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