

Study program: PhD in Biology				
Study level: Doctoral degree				
Course title: REPRODUCTIVE ENDOCRINOLOGY				
Course code: DNB019				
Teacher: Tatjana Kostic PhD, Full Professor; Silvana Andric PhD, Full Professor				
Course status: Elective				
ECTS: 15				
Requirements:				
Course objectives The aim of this course is to study the mechanisms of the reproductive endocrinology and the interconnectedness of different signaling pathways that control reproduction.				
Learning outcomes After successfully completing the course, students should be able to describe the mechanisms of neuroendocrine control of reproductive axis, reproductive signaling molecules, as well as the endocrine function of the reproductive system at different ages. Using the analysis of examples from clinical practice and studies in laboratory animals, students should develop the ability of critical thinking and discussion of scientific papers in the field of reproductive endocrinology.				
Syllabus <i>Theoretical instruction</i> Signaling in reproduction. Neuroendocrinology of reproduction. Gonadotropins, prolactin and their receptors. Synthesis and metabolism of steroid hormones. Neuroendocrine basis of puberty. Endocrine regulation of the ovarian function. Endocrine regulation of the testicular function. Endocrinology of pregnancy, labour and lactation. Endocrine basis of puberty. Stress and reproduction. Circadian clock in reproductive physiology. <i>Other forms of teaching (Practical laboratory)</i> Each student will have an individual project assignment in the research related to the reproductive endocrinology. <i>Seminars.</i> Short presentation of the specified topics connected with the subject of student's PhD thesis.. <i>Journal Club.</i> Presentation of the original peer-review scientific paper from the field of chronobiology.				
Literature (1) Yen & Jaffe. <i>Reproductive Endocrinology, Physiology, Pathophysiology and Clinical Management</i> . Elsevier 2014. (2) Chedrese PJ. <i>Reproductive Endocrinology: A molecular approach</i> . Springer 2009 (3) Jonson M.H. <i>Essential reproduction</i> . Blackwell 2007. (4) Review papers from the field of reproductive endocrinology.				
Weekly teaching load				
Lectures: 2	Teaching laboratory:	Other forms of teaching: 4	Research activities	Other:
Teaching methods <i>Theoretical part</i> – Lectures/Consultative discussions. <i>Students research work</i> – participation in the planning and execution of the experiments and the analysis, interpretation and discussion of the experimental results from the field of chronobiology. <i>Seminars</i> - Short presentation of the specified topics connected with the subject of student's PhD thesis. <i>Journal Club.</i> Presentation of the original peer-review scientific paper from the field of chronobiology				
Grading method (total number of points 100)				
<i>Scientific project problem</i> – up to 30; <i>Seminar</i> – up to 5; <i>Presentation of the original scientific paper (Journal club)</i> – up to 20; <i>Oral exam</i> – up to 45.				