Course Unit Descriptor

Study Programme: PhD- Biology			
Course Unit Title: Molecular regulation of the ovarian function			
Course Unit Code: DNB034			
Name of Lecturer(s): Assistant Professor Nebojsa Andric			
Type and Level of Studies: PhD			
Course Status (compulsory/elective): Elective			
Semester (winter/summer): Winter			
Language of instruction: English			
Mode of course unit delivery (face-to-face/distance learning): Face-to-face			
Number of ECTS Allocated: 15			
Prerequisites: None			
Course Aims: The course provides knowledge about molecular mechanisms in regulation of the mammalian ovarian function..			
Learning Outcomes: After complition of the course, it is expected that students (i) explain the molecular mechanisms that control folliculogenesis and functions of adult ovary (ii) conduct research in the filed of female reproductive endocrinology.			
Syllabus: *Theory* Mechanisms that control early folliculogenesis. Gonadotropins regulation of the ovarian function. Autocrine and paracrine regulation of the ovary. Molecular control of the ovulation. Ovarian function and failure: The role of oocyte and its molecules. Molecular control of corpus luteum. *Practice* Experimental models: primary culture of immature and preovulatory granulosa cells; analysis of signlaning pathways activity after stimulation with gonadotropin hormones in different experimental conditions; analysis of the results and preparation of manuscripts.			
Required Reading: JoAnne S. Richards and Mario Ascoli (2018) Endocrine, Paracrine and Autocrine Signaling Pathways That regulate Ovulation. Trends in Endocrinology&Metabolism, Vol 29, No.5: 313-325. Richards, J.S. and Pangas S.A. (2010) The ovary: basic biology and clinical implications. J Clin Invest 120(4): 963-972 Yen & Jaffe's Reproductive Endocrinology; Physiology, pathophysiology and Clinical Management, Elsevier 2014 (seventh edition)			
Weekly Contact Hours:	**Lectures:**	**Practical work:**	
Teaching Methods: Lectures, experimental work, analysis and presentation of experimental results, presentation of the articles from the filed of the reproductive toxicology (journal club)			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	**Final exam**	points
Active class participation		written exam	

Practical work		oral exam	60
Preliminary exam(s)			
Seminar(s)	40		
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			