UČNI NAČRT PREDMETA / COURSE SYLLABUS	
Predmet:	**Raziskovalni seminar 3**
Course title:	**Research Seminar 3**

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Matematika, 3. stopnja		**2.**	**4.**
Mathematics, 3rd cycle		**2nd**	**4th**

Vrsta predmeta / Course type | obvezni/compulsory

Univerzitetna koda predmeta / University course code:

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Klinične vaje work	Druge oblike študija	Samost. delo Individ. work	ECTS
	15				75	3

Nosilec predmeta / Lecturer: | Habilitirani nosilci predmetov v programu / Teachers listed in the program

Jeziki / **Languages:**	**Predavanja /** **Lectures:**	Slovenski jezik; Slovene
	Vaje / Tutorial:	Slovenski jezik; Slovene

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:

Prerequisits:

Ni posebnih pogojev.	No special requirements.

Vsebina:

Študent na podlagi dobrega poznavanja ožjega matematičnega področja, na katero sodi njegova bodoča disertacija, prične razvijati nove koncepte in si prizadeva za pridobitev pomembnih samostojnih rezultatov na tem področju. Na seminarju študenti predstavljajo svoja odkritja in se seznanjajo z dosežki drugih udeležencev študija.

Content (Syllabus outline):

Student with good knowledge of "the state of the art" in the narrow mathematical field, to which belongs his/her future thesis starts with the development of new concepts and tries to obtain valuable research results in the corresponding area. During the seminar students present their results and get familiar with the acquaintances of other participants.

Temeljni literatura in viri / Readings:

- Literatura iz raziskovalnega področja.

Dodatna literatura / Additional Readings:
- Kandiller, L. Principles of mathematics in operations research, Berlin: Springer-Verlag, 2007.
- Shubik, M. Game Theory in the Social Sciences, Massachusetts: MIT Press, 1985.
- Sethuraman, B. A. Rings, fields, and vector spaces, Berlin: Springer-Verlag, 1997.
- Kreps, D. M. Game Theory and Economic Modeling, Oxford: Oxford University Press, 1990.
- Oyvind Hjelle, O., Daehlen, M. Triangulations and applications, Mathematics and visualization, Berlin: Springer-Verlag, 2006.
- Zomorodian, A. J. Topology for computing, Cambridge: Cambridge University Press, 2009.
- Ferguson, T. S. Mathematical Statistics – A decision-Theoretic Approach, New York: Academic Press, 2014.
- Allgower, E. L., Georg, K. Numerical Continuation Methods, Berlin: Springer-Verlag, 2011.

Cilji in kompetence:

- pripraviti študente za bodoče samostojno raziskovalno delo, oblikovanje novih pojmov in konceptov ter razvoj teorij, ki jih vključujejo.
- študent se usposobi za inovativno delo na ožjem matematičnem področju, ki ga mora biti sposoben nadgrajevati in širiti v različnih smereh, kakor znotraj matematike, tako tudi v druge znanstvene discipline.

Objectives and competences:

- to prepare students for their future independent research work, the formation of new notions, concept and the development of theories, including them.
- student aquaintains the ability to work innovatively in a narrow mathematical area and to upgrade it in different directions, as well inside mathematics, as in other scientific disciplines.

Predvideni študijski rezultati:

Znanje in razumevanje:

- aktivno obvladovanje širšega strokovnega področja, na katero sodi bodoča doktorska disertacija
- formiranje specifičnega znanje in sposobnost razvijati nove matematične koncepte ter teorije
- sposobnost posredovati nove koncepte in uporabljene metode drugim ter sodelovati pri skupinskem delu na področju razvoja svoje znanstvene discipline.

Intended learning outcomes:

Knowledge and understanding:

- the knowledge of the wider mathematical field to which the dissertation will belong
- the development of special knowledge and the ability to develop new mathematical concepts and theories
- the abbility to transfer the topic of the investigation and used methods to other scientists and to participate in a group, developing new scientific theory.

Prenesljive/ključne spretnosti in drugi atributi:	Transferable/Key Skills and other attributes:
• strokovno zapisovanje in izražanje matematičnih vsebin • obvladanje reševanja strokovnih problemov • suvereno predstavljanje ključnih spoznanj in spretnost argumentiranja	• expressing mathematical contents in oral and written form • ability to solve specific mathematical problems • clear presentation of the results of research work and efficient argumentation

Metode poučevanja in učenja:

- konzultacije;
- priprava seminarja;
- samostojni študij.

Learning and teaching methods:

- consultations;
- seminar work;
- self-study.

Načini ocenjevanja:	Delež (v %) / Weight (in %)	Assessment:
Ustna predstavitev	Opravil / Ni opravil Pass / Fail	Oral presentation

Reference nosilca / Lecturer's references:

Habilitirani nosilci predmetov v programu / Teachers listed in the program