Program	Level	First cycle / Second cycle
	Name of the program	Pure Mathematics, Mathematics Education

COURSE

Course title	**Selected Topics in Algebra**			
Course code	Semester	Course status	ECTS	Contact hours (L+AE+LE)
PMAT 385	IV	elective	5	2+2+0
Lecturer				
Course Goals	The goal is to extend the knowledge of the topics studied in the other courses of algebra that students find interesting in the interaction with a professor.			
Learning Outcomes	After finishing the course the students will extend the knowledge in selected topics of algebra and be able to independently creatively make a research in the interesting topics.			

COURSE CONTENT

The content of the course is not fixed, but students together with their professor choose the topics form algebra in the accordance with their interest. Possible topics are Galois Theory, commutative and non commutative algebra, algebraic geometry, valuation theory, graduated structures, theory of finite fields, homological methods of algebra and others. Since some of these topics are studied in the II cycles they will be lectured in the introductory level in accordance with students interest.

LITERATURE

Literature depends on the selcted topics and includes:

[1] V. Perić: "Algebra II", Svjetlost, Sarajevo, 1991

[2] M. F. Atiyah, I. G. MacDonald: "Introduction to Commutative Algebra", Addison Wesley Publishing Company, Massachuses, 1969 (Ruski prevod: Izdatel'stvo "Mir", Moskva, 1972)

[3] R. Miles: "Undergraduate Commutative Algebra", London Math. Soc. Student Text 29, 1995

[4] D. Eisebund: "Commutative algebra with a view towards algebraic geometry (Graduate Texts in Mathematics v. 150)", New York, Springer-Verlag, 1996

[5] B. J. Fraleigh: "A First Course in Abstract Algebra", 4th ed., Addison-Wesley Publishing Company, New York, 1989

[6] T. Y. Lam: "A First Course in Noncommutative Rings", Springer-Verlag, New York, 1991

[7] M. Krasner, M. Vuković: "Structure Paragraduées (Groupes, Anneaux, Modules)" monografija, Queen's Papers in Pure and Applied Mathematics/No. 77, Queen's University, Kingston, Ontario, Canada, 1987

[8] S. Raghvan, R. Balwant Singh-Sridharan: "Homological Methods in Commutative Algebra", Tata Instute of Fund. Research. Bombay, Oxford University Press, 1975

[9] H. Cartan, S. Eilenberg: "Homological algebra", Princeton University Press, 1956

[10] Rudolf Lidl , Harald Niederreiter: "Finite Fields", Addison-Wesley Publishing Company, London, 1983

STUDENT WORKLOAD (hours in a semester)

Lectures	30	Tutorial	30	Individual work	65	T o t a l	125

GRADING			REMARKS	

Criterion	Maximum points	Minimum points
Midterm exams	50	25
Homework assignment		
Project		
Laboratory assignments		
Final exam	50	25
T o t a l	100	55