Program	Level	First cycle
	Name of the program	Pure Mathematics, Applied Mathematics, Mathematics Education, Mathematics and Informatics Education

COURSE				
Course title	**Algebra I**			
Course code	Semester	Course status	ECTS	Contact hours (L+AE+LE)
PMAT310	V	Mandatory course	6	3+3+0
Lecturer				
Course Goals	Achieving basic knowledge in group theory and ring theory.			
Learning Outcomes	At the end of this course, students will be able to understand basic terms from group theory and ring theory. Students will be familiar with basic theorems from these fields as well as with main constructions. Students will be able to solve problems and tasks from these fields by using basic techniques. Also, students will be able to attend and follow more advanced Algebra courses as well as courses where Algebra is applied.			

COURSE CONTENT

- Groups. Elementary properties of groups. Subgroups. Cyclic groups. Normal subgroups and quotient groups. Lagrange's theorem. Isomorphisms and homomorphisms of groups. Permutation groups. Group actions.
- Rings. Elementary properties of rings. Subrings and ideals. Quotient rings. Homomorphisms and isomorphisms of rings.
- Fields. Elementary properties of fields. Field Extensions. Algebraic extensions and Algebraically Closed Fields. Finite fields.

LITERATURE

[1] D. S. Malik, John Mordeson, M. K. Sen, Fundamentals of Abstract Algebra, Mcgraw-Hill College, 1996

[2] Joseph Gallian, Contemporary Abstract Algebra, Brooks Cole, 8 edition, 2012

[3] H. Jamak, Algebra, NIK Sezam, Sarajevo, 2004.

[4] Serge Lang, Algebra, Springer-Verlag, 2002

[5] Z. Stojaković, Đ. Paunić, Zadaci iz algebre: Grupe, prsteni, polja, Univerzitet u Novom Sadu, 1998

[6] G. Kalajdžić, Algebra, Matematički fakultet, Beograd, 1998.

STUDENT WORKLOAD (hours in a semester)							
Lectures	45	Exercises	45	Individual work	60	T o t a l	150

GRADING			**REMARKS**
Criterion	Maximum points	Minimum points	
Midterm exams	50	30	
Final exam	50	25	
T o t a l	100	55	