Program	Level	Second cycle			
	Name of the program	Pure Mathematics			

COURSE

Course title	**Topological Groups**				
Course code	Semester	Course status		ECTS	Contact hours (L+AE+LE)
PMAT 525	III	Elective course		7	3+2+0
Lecturer					
Course Goals	- This course provides new concepts in the fields of topology, topological groups, factor groups, uniform structures, disconnectedness, total disconnectedness and metrisability . - It assures a solid base for eventual futher mastering of relating fields				
Learning Outcomes	- The ability to apply the acquired knowledge in relating areas of mathematics				

COURSE CONTENT

- Definition and basic properties of topological groups.
- Notion of subgroups. Theorem on topological basis.
- Theorem on properties of topological groups.
- Examples.
- Factor group and theorems..
- Theorem on 0-dimensional topological space.
- Theorem on component element.
- Theorem on special subgroups of a topological group.
- Theorem on group centre and central normal divisor
- Theorem on totally disconnected topological groups.
- Uniform structures on topological groups. Theorem on uniform continuity.
- Invariant pseudometric and separation axiom.
- Theorem on pseudometrisability.

LITERATURE

[1]   M. Pepić, Topološke grupe, Interna skripta za studente drugog ciklusa studija Prirodno-matematičkog fakulteta u Sarajevu, Sarajevo 2012.
[2]   E. Hewitt and K.A. Ross, Abstract harmonic analusis, Vol. I, Berlin, 1963.

STUDENT WORKLOAD (hours in a semester)

Lectures	45	Exercises	30	Individual work	100	T o t a l	175

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