

MATH-416

**Analysis on groups**

Monod Nicolas

Cursus	Sem.	Type
Ing.-math	MA1, MA3	Opt.
Mathématicien	MA1, MA3	Opt.

Language of teaching	English
Credits	5
Session	Winter
Semester	Fall
Exam	Oral
Workload	150h
Weeks	14
<b>Hours</b>	<b>4 weekly</b>
Courses	2 weekly
Exercises	2 weekly
<b>Number of positions</b>	

**Summary**

We study analytic phenomena on groups, notably paradoxical decompositions and fixed point properties.

**Content**

Paradoxical decompositions  
 Fixed point theorems  
 Harmonic analysis

**Learning Prerequisites****Recommended courses**

Topology I, II

**Learning Outcomes**

By the end of the course, the student must be able to:

- The students will demonstrate a deep understanding of the concepts introduced in the lecture. They will understand paradoxicality. They will prove fundamental results. Rigor is a paramount skill to be demonstrated and creativity a key asset to be displayed.

**Teaching methods**

Ex cathedra lecture and exercises in the classroom

**Expected student activities**

- Follow the lectures
- Attend the exercise sessions
- Attempt to solve all exercises and write up the result of these attempts
- Work over the lecture

**Assessment methods**

Exam oral

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Dans le cas de l'art. 3 al. 5 du Règlement de section, l'enseignant décide de la forme de l'examen qu'il communique aux étudiants concernés.

**Supervision**

Office hours	Yes
Assistants	Yes
Forum	No