



## MATH2321 Mathematic Education

[22.5h] 2 credits

**Teacher(s):** Christiane Hauchart  
**Language:** French  
**Level:** Second cycle

### Aims

This course, which is complementary to the general teaching methods course, forms part of an overall project to encourage future secondary teachers to provide teaching that will be meaningful to their pupils.

### Main themes

This course draws attention to the specific characteristics of the learning of mathematics, through the study of specific secondary mathematics material and of different kinds of approach to it. In particular, it deals with questions such as the construction of mathematical knowledge and the guiding threads involved in learning mathematics: - how can one draw on everyday notions in order to construct the formalised mathematical concepts that they prefigure? - is the method of strict deduction (which is the basis of mathematics) the only one that can serve to guide this work (cf., for example spiral teaching: a learning progressing through successive stages, of an increasing generality)? - do methods exist for solving mathematical problems (cf. Polya)? This study involves examining the development of mathematics in history and the role of history in the teaching of mathematics, as well as those authors who have written on the nature of mathematical activity. The intrinsic connection between mathematics and physics will be emphasised. Students will be encouraged to become actively involved, for example in researching or analysing documents or in solving problems.

### Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

Obligatory course for those students taking the mathematics teacher-training option. Optional course for those students taking the science teacher-training option. Complementary course to the course in general teaching methods: should be followed after that course or in parallel with it.

### Programmes in which this activity is taught

**SC2A** Agrégation de l'enseignement secondaire supérieur (sciences exactes)

### Other credits in programs

<b>SC2A/G</b>	Agrégation de l'enseignement secondaire supérieur (Géographie) (Géographie)	
<b>SC2A/M</b>	Agrégation de l'enseignement secondaire supérieur (Mathématique) (Mathématique)	Mandatory
<b>SC2A/P</b>	Agrégation de l'enseignement secondaire supérieur (Physique) (Physique)	
<b>SC2A/S</b>	Agrégation de l'enseignement secondaire supérieur (Sciences naturelles) (Sciences naturelles)	