EPFL

MATH-731   **Topics in geometric analysis I**

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Cursus	Sem.	Type
Mathematics		Opt.

Language of teaching	English
Credits	2
Session	
Exam	Oral
Workload	60h
Hours	**52**
Courses	4
TP	48
Number of positions	

Frequency

Every 2 years

Remark

Postponed until further notice

Summary

The subject deals with differential geometry and its relation to global analysis, partial differential equations, geometric measure theory and variational principles to name a few.

Content

The subject of Geometric Analysis has appeared some 60 years ago although the name is more recent. The subject deals with differential geometry and its relation to global analysis, partial differential equations, geometric measure theory and variational principles to name a few. Geometric Analysis is at force whenever strong mathematical analysis is used to solve problems in differential geometry. The Calabi conjecture, the Yamabe conjecture and most spectacular the Poincaré conjecture all have been solved by methods from geometric analysis. The goal of this course is to introduce the student to the basic techniques of geometric analysis. The subject covered vary each year. Typical subjects will be: global analysis, Hodge theory, PDE's on Manifolds, advanced Riemannian geometry etc.

Resources

Websites

- http://wiki.epfl.ch/grtr