

# Currents and varifolds, fall 2011

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**News: no lectures on October 13, 14 and 21, there will be lectures on October 27, 14-16, and October 28, 10-12, in C123**

### Lecturer

[Pertti Mattila](#)

### Scope

10 cu.

### Type

Advanced studies

Currents and varifolds are generalized surfaces. Their theory is part of Geometric Measure Theory. They have been used in many geometric variational problems, in particular in higher dimensional minimal surfaces. In the course their basic theory is presented and some applications are discussed.

### Prerequisites

Good knowledge of Measure, Integration and Real Analysis, at least corresponding to the courses Mitta ja integraali and Reaalianalyysi I and II

### Lectures

Weeks 37-42 and 44-50, Thursday 14-16 in room C124, Friday 10-12 in room C123.  
First lecture on Thursday, September 15.

### Exams

### Bibliography

H. Federer, Geometric Measure Theory, Springer, 1969  
F. Lin and X. Yang, Geometric Measure Theory, an Introduction, International Press, 2002  
F. Morgan, Geometric Measure Theory, a Beginner's Guide, Academic Press, 1987  
L. Simon, Lectures on Geometric Measure Theory, Australian National University, 1983

### Registration

Did you forget to register? [What to do](#).  
Don't worry, not necessary.

### Exercise groups

No exercise groups.

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