

**Structure of the exam for the lecture:****Introduction to nonlinear geometric PDEs**

The oral exams will take place in the upcoming exam period in the last two weeks of January 2014. The exam lasts for 20 minutes.

You are allowed to bring one hand written sheet of paper of size A4 filled on one side with your own notes and left blank on the other side.

All material which is contained in the exercise sheets is examinable. However, we exclude those exercises which are marked with a star.

All material which is contained in the lecture notes is examinable. However, we exclude proofs which we didn't discuss in detail. Those are by definition:

- Proofs of:  
Statements in part one (introduction and review).
- Proofs of:  
Theorem 4.1 (Brouwer), Theorem 4.5 (Leray-Schauder), Theorem 4.8 ( $C^1$ -reduction), Theorem 5.5 (sup estimate), Theorem 6.3 (inverse function theorem), Theorem 6.13 ( $C^{1,\beta}$ -reduction), Theorem 6.15 ( $C^1$ -reduction).
- Proofs of most of the mean curvature flow results:  
Theorems 8.12, 8.14, 8.16, 8.18, 8.22 and Proposition 8.19.
- Proofs of some of the inverse mean curvature flow results:  
Lemmas 8.37, 8.38 and Lemmas 8.41 - 8.45.

However, in the cases where we provided an outline of the proof you should be able to mention the main ideas.

Good luck with the preparation!