

Syllabus for Differential Geometry 7.5 ECTS credits**1. Course details**

Approved by the Education Committee of the Faculty of Sciences 01-03-2007. The syllabus is valid from 01-07-2007. The course is at the Second cycle.

2. General information

The course is part of the main field of study in Mathematics at the Faculty of Science. The course is optional at the Second cycle in a Master's degree in Mathematics. The course is also offered as a single subject course. The language of instruction is contingently English.

3. Learning outcomes

On completion of the course, the students shall:

- have developed the ability for mathematical communication orally and in writing,
- be familiar with basic concepts and methods in differential geometry.
- have acquired basic knowledge for further studies in differential geometry.

4. Course content

Geometry for hypersurfaces in Euclidean spaces. The Gauss map, curvature, focal points, minimal surfaces, convex surfaces, the Gauss-Bonnet theorem in 2 dimensions.

5. Teaching and assessment

Teaching consists of lectures and seminars. Compulsory hand-in exercises might be given during the course.

Examination takes the form of a written test and, in connection with this, an oral examination.

Oral examination is held only for those who passed the appurtenant written test.

Students who fail the ordinary tests will have an opportunity to take another test in close proximity to the ordinary test.

6. Grades

Students are awarded one of the following grades: Distinction, Pass or Fail.

7. Admission requirements

To be eligible for the course requires: At least 60 ECTS credits in mathematics.

8. Literature

According to a list established by the department, available at least five weeks before the start of the course. See the web-page for Mathematics NF.

9. Further information

The course cannot be credited as part of a degree along with MAT313 Differential Geometry, 5p.