

# Syllabus: Differential Geometry Reading Course I

The idea of this reading course is to create a solid understanding of Differential Geometry.

- **Calendar:** Starting second week of September
- **Time/place:** seminar room 326, Monday and Thursday at 10am
- **Methodology:** We meet twice a week and each meeting is separated in two parts: summary of the readings and problem solving. Two different people lead each part, following the schedule bellow. The person who discusses the readings that everyone has to do for a given meeting mostly summarizes the important points and problems of the sections. He does not necessarily give a detailed talk based on the book. The other part consists of someone solving his favorite problems from the readings of the previous meetings. We solve problems in a delayed manner to leave time for people to do them after having discussed the material. The problem solver of a given meeting tells the group at least two days in advance which of the problems he will solve.
- **Bibliography:**
  - "The Geometry of Physics", 3rd Edition, Theodore Frankel (PDF online)
  - "A comprehensive introduction to differential geometry", vol. 1, 3rd edition, Michael Spivak (PDF online)

- (tentative) schedule:

Name	Date	Content
Guilherme (Disc)	sep 12	1.1
Yan (Ex) / Sigg (Disc)	sep 15	1.2
Alessandro (Ex) / Jake (Disc)	sep 19	1.3 - 1.4
Kays (Ex) / Tarique (Disc)	sep 22	2.1
Anh-Khoi (Ex) / Kale (Disc)	sep 26	2.2 and 2.3
Laure-Anne (Ex) / Yan (Disc)	sep 29	2.4 and 2.5
Guilherme (Ex) / Alessandro (Disc)	oct 3	2.6 and 2.7
Sigg (Ex) / Kays (Disc)	oct 6	2.8 - 2.10
THANKSGIVING	oct 10	THANKSGIVING
Jake (Ex) / Anh-Khoi (Disc)	oct 13	3.1
Tarique (Ex) / Laure-Anne (Disc)	oct 17	3.2 and 3.3
Kale (Ex) / Guilherme (Disc)	oct 20	3.4 and 3.5
Yan (Ex) / Sigg (Disc)	oct 24	4.1 and 4.2
Kays (Ex) / Jake (Disc)	oct 27	4.3
Guilherme (Ex) / Tarique (Ex)	oct 31	Guilherme: ex. 4.3; Tarique: ex. on Fluid Flow
Laure-Anne (Ex) / Kale (Ex)	nov 3	Laure-Anne: 4.4(1 - 3); Kale: 4.4(4-7)
Anh-Khoi (Ex)/ Yan (Ex)	nov 7	Anh-Khoi: 4.4(8-11); Yan: 4.4(11-14)
Kays (Disc)	nov 10	chapter 5
Sigg (Ex) / Tarique (Disc)	nov 14	6.1 and 6.2
Jake (Ex) / Guilherme (Disc)	nov 17	6.3
Laure-Anne (Disc)	nov 21	7
Kale(Ex) / Anh-Khoi (Disc)	nov 24	8.1 and 8.2
Kays (Ex) /Yan (Ex)	nov 28	Tarique: ex.8.1 and 8.2; Yan: ex. 8.3(1-6)
Tarique(Ex)/Sigg (Ex)	dec 1	Guilherme: ex. 8.3(7-11); Sigg: ex. 8.3(12/17)
Jake (Disc)	dec 5	8.4 and 8.5
Guilherme (Ex) / Kale (Disc)	dec 8	8.6 and 8.7
Laure-Anne (Ex) / Anh-Khoi (Disc)	dec 12	9.1-9.3
Kays(Ex) / Yan (Disc)	dec 15	9.4 and 9.5
Tarique (Ex) / Sigg (Disc)	dec 19	9.6 and 9.7