

April 18, 2023
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Info. Sheet 1; Advanced Topics in Geometry E1 (MTH.B505)

Course Syllabus

Important Pointers:

- <http://www.math.titech.ac.jp/~kotaro/class/2023/geom-e1> (official web)
- <http://www.official.kotaro.y.com/class/2023/geom-e1> (a mirror)
- <https://t2schola.titech.ac.jp/> (T2SCHOLA)

Lecture: Tuesdays 10:45–12:25, Lecture hall M-B107

Lecturer: Kotaro Yamada (Dept. Math.); kotaro@math.titech.ac.jp

Course Description: As an informal introduction to Riemannian manifold, geometry of submanifolds in (pseudo) Euclidean spaces is introduced.

Student learning outcomes: Students are expected to learn Pseudo Euclidean space; Induced metrics on submanifolds in a (pseudo) Euclidean space; Covariant derivatives on submanifolds; Geodesics on submanifolds.

Textbooks: No textbook is set. Lecture note will be uploaded on T2SCHOLA within the previous day of each class.

Grading Policy:

- Graded by weekly homeworks.
- Each homework consists of (1) a problem on the topics in the lecture (up to 2 points), and (2) to present a question on the contents of the lecture, or to point out error(s) in the lecture note/the lecture (up to 3 points).
- Each homework should be submitted to T2SCHOLA by 10:00 on the following Thursday of the lecture, as an pdf file in the format of the **homework sheet** (which can be downloaded from the folder “Homework Sheet” on T2SCHOLA). **Japanese is acceptable.**
- Questions, requests and comments (and the answers, lecturer’s comments) will be disclosed on the following class.