2019/06/18
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Info. Sheet 1; Advanced Topics in Geometry B1   MTH.B406

Course Syllabus

Important Pointers:

- http://www.math.titech.ac.jp/~kotaro/class/2019/geom-b   (official web)
- http://www.official.kotaroy.com/class/2019/geom-b   (a mirror)
- http://www.ocw.titech.ac.jp/   (Tokyo Tech OCW)
- Office 231, the second floor of the main building   (Yamada's office)

Lecture: Tuesdays 10:45–12:15, Class room 104, the main building

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

Course Description: Definition and meanings of the "curvature" of Riemannian manifolds, especially those obtained as submanifolds of (pseudo) Euclidean space, are introduced.

Student learning outcomes: Students are expected to know

- the integrability condition of linear system of partial differential equations,

- the sectional curvature of a Riemannian manifolds,

- the curvature as an integrability condition,

- and the local uniqueness of Riemannian manifolds of constant sectional curvature.

Textbooks: No textbook is set. Lecture note will be provided.

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 the lecturer's mailbox (at office 231, the second floor of the main building) by 13:00 on the following Thursday of the lecture, in the specified sheet. *Japanese is acceptable.*

- Questions, requests and comments (and the answers, lecturer's comments) will be disclosed on the following class.