

2023 EPYMT - Towards Differential Geometry

Course Information

A warm welcome to this course EPYMT TDG. This is a course outline. Important points will be emphasized on the first day. However, you are still strongly recommended to read all the details.

1 Course Information

- Course Title: Towards Differential Geometry
- Course Code: SAYT1134
- Lecture and Tutorial Date: 9/8, 11/8, 14/8, **16/8**, 18/8, 21/8, **23/8**, 25/8, 28/8
- There will be special arrangement for 9/8 due to a guest talk. Besides 9/8, the general arrangement will be as follows:
 - **Lectures:** 10:30 - 13:30 (Venue: ERB 407)
 - **Lunch Time:** 13:30 - 14:30 (at own expenses)
 - **Tutorial:** 14:30 - 17:30 (Venue: Group 1- ERB 407; Group 2- **LSB222**; Group 3- ERB 408)
- Tentative Test and Exam Date:
 - **1st test:** 16/8, 16:00 - 17:30 (Venue: Group 1- ERB 407; Group 2- **LSB222**; Group 3- ERB408)
 - **2nd test:** 23/8, 16:00 - 17:30 (Venue: Group 1- ERB 407; Group 2- **LSB222**; Group 3- ERB408)
 - **Final Examination:** 30/8, 10:30 - 13:30 (Venue: ELB LT4)
- Reserved Date: 17/8, 24/8, 31/8
- Instructor: Dr. Cheng Man Chuen (Email: mccheng@math.cuhk.edu.hk)
- Teaching Assistant:
 - **Group A:** Tommy Lam[†], Max Shung, Nelson Lam, Sam Meng
 - **Group B:** Clive Chan[†], Jeffrey Mak, Max Wong
 - **Group C:** Michael Cheung[†], Alex Tang

Note 1. Students are suggested to arrive at the venue 5 minutes before the lecture or tutorial starts.

Note 2. The teaching assistant marked with [†] is the group leader of the corresponding group. Students are advised to consult them as first priority for any questions. Contact information of each group leader will be provided during the first tutorial session.

2 Assessment Scheme

The course consists of **TWO** tests and **ONE** final exam, which constitute 100%(30%/30%/40%) of the entire course. All the tests are **closed-book**, **closed-notes**. More details including exam scope, allowed stationery will be announced later.

3 Attendance and Absence

3.1 Attendance

Attendance will be taken at the beginning of **every** lectures and tutorials. Please arrive on time. An unsatisfactory attendance rate may lead to a grade deduction at the end of the course.

3.2 Application for Absent and Corresponding Arrangement

- **Sick Leave:** In case of illness necessitating absence, the student shall write an email to the **course instructor** (Dr. Cheng, email: mccheng@math.cuhk.edu.hk) and **teaching assistant** (Clive Chan, email: thchan@math.cuhk.edu.hk) with your medical certificate attached, within two days from the day of absence.
- **Personal Leave:** Students who wish to apply for a leave of absence for **non-medical reasons** shall apply in writing to obtain permission from the **course instructor** or **teaching assistant**, with the reason and supporting documents two days before the day of absence.
- Students who have been absent from lectures or tutorials for any period shall be responsible for applying any missing materials and work.
 - Students shall approach your group leader for any missed teaching materials.
 - In case the student misses a test with approved absence, a make-up test will be provided on the next lecture day.
 - **No make-up exam for the final examination.**

4 Study Materials

- **Lecture Notes:** It contains all the main topics covered in this course. Mainly used in lectures. Students are advised to get used to the definitions, understand how theorems are derived from definitions, and master the application of theorems through examples.
- **Tutorial Notes:** It served as teaching material for tutorial sessions. It extracts main definitions and theorems from the corresponding topics and included more examples for better understanding.
- **Supplementary Notes:** It served as self-learning material, it may contain some elementary knowledge or some extended topics. Students may enrich themselves if interested.

5 Group Changing Arrangement

- **General Arrangement.** After each test, your teaching assistants will examine your test results and in-class performance. Only students with extraordinary performance will be considered.
- **Special Application.** Students may apply for group changing. Critical reasoning must be provided. Students are reminded that group changing is not common. Please don't expect a high chance to change your group with your own application.

For general arrangement, the group changing result will be informed in the next lecture after the test. For special applications, the result will be informed in the next lecture after the day of application. Students have to attend the changed class on the informed day.

General Comments

Courses offered in EPYMT are generally harder and more challenging than the secondary school syllabus. This course 'Towards Differential Geometry' is one of the hardest ones among all available. One can only learn mathematics well by getting their hands dirty and this course will not be an exception. Students would need to sit down and learn this course by doing many messy computations yourself. Remember, the hard works will pay off.

Students may suffer from the fast pace and intense peer competition at the beginning of the course. Teaching assistants are always friendly so please approach them whenever you need help.

'There are no stupid questions'. Please do not hesitate and feel free to raise your question.

Good luck and enjoy!