

1) Overview (1000-level math courses)

Math Department currently offers **five** single variable calculus courses at **different levels** and with **different intensions**. They are:

Math1013*/1014 (Math013/014),

Math1023*/1024 (Math023/024),

Math1018 (Math021),

Math1020* (**New** for 4Y with 5* or above in M2)

Math1003* (Math006).

The first two are year long sequences, and the last three are semester long courses.

* common core courses under QR

2) Purpose of each course

Math1013/1014: Complete single variable calculus at normal level. Students are expected to know the basic concepts and carry out the computations.

Math1023/1024: Complete single variable calculus at more advanced level. Students are expected to understand the basic concepts and make simple theoretical arguments (such as providing reason for the specific computation, quite a bit of proofs). This is an honor course of Math1013/1014.

(Student with a level 5 or above in HKDSE Mathematics Extended Module M2 are encouraged to try out these honor classes)

Math1018: Basic material in single variable calculus. The course contains enough material so that students who passed Math1018 can continue studying the other math courses. **For 3Y students with A-level Pure Math.**

Math1020: Advance material in single variable calculus. Expected students have learnt well in calculus before (M2 with 5* or above). The course contains advance material so that students who passed Math1020 can continue studying the other higher level math courses. **For 4Y students.**

Math1003: Minimum material in single variable calculus. The course provides the basic knowledge of calculus but not enough for further study in more advanced math courses. (please note that this is a “**dead end**” math course)

3) Relation between different courses

Math1023/1024 > Math1013/1014 = Math1020 > Math1018 > Math1003

If you pass **Math1023** in fall, then you can take either Math1024 or Math1014 in spring.

If you pass **Math1013** in fall, then you can take Math1014 in spring. If you perform exceptionally well in Math1013, then you can take Math1024 in spring.

If you pass **Math1018, Math1020 or Math1003**, then you **cannot** take other single variable calculus courses.

4) How does the choice affect further study

Math(1013/1014) / (1023/1024) / 1020 is the prerequisite for Math2043 (honor analysis course) or Math2031/2033 (the normal analysis course).

Although according to the official rule, getting A- or above in Math1014 / 1020 / 1024 can allow you to register Math2043, it is strongly advised that only those who took Math1023/1024 (or MATH1020) continue with Math2043

because otherwise you will be guaranteed to have a tough time and low grade in Math2043. The same applies to Math2131 (another honor course).

Students intend to do **research in Math** are strongly advised to Math1023/Math1024.

5) Other math courses that are offered at different levels

The following is the list of other equivalent math courses that are offered at different levels.

Math2021 (Math102) > **Math2023** (Math101) > **Math2011** (Math100)

Math2131 (Math217) > **Math2121** (Math111)

Math2352 (Math151) > **Math2351** (Math150)

Math2043 (Math203) > **Math2031** (Math202) > **Math2033** (Math201)

[Course codes in () denote the old 3-digit codes]

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