

1) Overview (1000-level math courses)

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

(4-digit system) (3-digit system)

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 level 5* or above in standard Math and 5 or above in **M1/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 course will continue to MATH1020, not MATH1013)

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(A grade), 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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