

## Freshman Math Advising, Fall 2016

The first question you should ask your advisee is:

HAVE YOU TAKEN ANY CALCULUS BEFORE?

- If the answer is **no**, then the student may choose between these first-year calculus sequences or an elementary statistics class:
  - Math 117 (Introduction to Calculus, Part I) and Math 118 (Introduction to Calculus, Part II) together cover all first-year calculus topics, the same topics that are covered in Math 121-122 (Calculus I and II), for students who have not taken calculus. Group work is emphasized. A student can choose to take one or both semesters.
  - Math 119 (Elements of Calculus, Part I) and Math 120 (Elements of Calculus, Part II) are new courses and form a linked sequence, that is, students **must complete both** semesters to get credit for the first semester. Together they cover the topics in AP AB calculus, incorporating pre-calculus topics as needed and emphasizing applications. Students who complete the sequence will be well-prepared to continue in the calculus sequence with Math 122. Recommended for students who have not previously taken calculus who are interested in the physical sciences.
  - Math 132 (Elementary Statistics), which does not require any background in calculus.

However, if the student is from a school with a rigorous pre-calculus curriculum and is a strong student, then he or she should be encouraged to consider beginning in Math 121 (Calculus I) instead.

Students may not receive credit for more than one of Math 117, the linked courses Math 119 and Math 120, or Math 121. Any of Math 117, Math 119 and Math 120, or Math 121 would be fine for pre-med students.

- If the answer is **yes**, then the student may consider one of the following:
  - Math 121 (Calculus I) is appropriate for students who have seen some calculus before and would like to start at the beginning, or scored 3 or below on the AP AB Calculus exam.
  - Math 122 (Calculus II) is good for students who had a good score (e.g. 4 or higher) on the AP Calculus AB Exam, or in general had a good but not outstanding previous experience in calculus.
  - Math 221 (Vectors and Matrices), Math 222 (Multivariable Calculus), Math 223 (Linear Algebra) are gateway courses to the major. If a student scored 4 or higher on the AP Calculus BC Exam or had an outstanding experience in calculus, then Math 221 or Math 222 is highly recommended. If, in addition, the student is considering a major in one of the physical sciences, then he or she may consider Math 223, which is a more theoretical version of Math 221. Also, a student cannot receive credit for more than one of Math 221 and Math 223.
- Students interested in studying statistics at the mathematics major level may continue in subsequent semesters with Math 221, 222 and the probability and statistics sequence Math 231 and 232.
- If you or your advisee do not feel comfortable with the recommendation accompanied with the Math Placement result, then please go with guidelines provided here.
- Should you need any assistance, feel free to contact our Chair Wai Kiu Chan (till June 30, 2016)/Adam Fieldsteel (starting July 1, 2016). Our Administrative Assistant Caryn Canalia (x2189) may also be able to answer your questions.