

## Freshman Math Advising, Fall 2020

The courses in the first-year calculus sequences are the basis for taking higher level mathematics courses. Thus, 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 or statistics courses:
  - Math 119 (Elements of Calculus, Part I) in the fall and Math 120 (Elements of Calculus, Part II) in the spring. Taken together, they cover the same topics as Math 121, at a slower pace and incorporating pre-calculus topics as needed and also emphasizing applications. Students may take Math 119 only; students who complete both courses will be well-prepared to continue in the calculus sequence with Math 122. Recommended for students who have not previously taken calculus.
  - Math 121 (Calculus I) is appropriate for strong students from a school with a rigorous pre-calculus curriculum who are interested in the physical sciences.
  - Math 132 (Elementary Statistics), which does not require any background in calculus.
  - Math 133 (Intermediate Statistics) is a second course after Math 132, and is appropriate for students with a score of 4 or 5 on the AP Statistics exam.

Students can not receive credit for Math 121 after taking Math 119 and Math 120, and can not receive credit for either of Math 119 or Math 120 after taking Math 121, because of their similar content. Any of these courses are fine for pre-med students. Introductory statistics courses do not satisfy pre-requisites for higher level mathematics courses.

- 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) in AP Calculus AB Exam, or in general had a good but not outstanding previous experience in calculus.
  - Math 123F (Mathematical Deduction with Calculus) is a first-year seminar with an emphasis on mathematical writing that covers the same topics as Math 122. It has a pre-requisite of Math 121.
  - 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. Students 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 and 222 and then to 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 Test result, then please go with guidelines provided here.
- Should you need any assistance, feel free to contact the Departmental Advisory Committee (listed on website). Our chair Karen Collins and administrative assistant Caryn Canalia (x2189) may also be able to answer your questions.