

January 1, 2019

Theodore Caputi was enrolled during the fall term of 2018 in my Harvard course Mathematics 23a, "Linear Algebra and Real Analysis," based on recorded lectures that I gave in 2015. Enrolled in the course were about 90 Harvard College students and more than 100 Extension students, most of them college graduates sharpening their mathematical skills in preparation for PhD programs in various fields. The main textbook was John and Barbara Hubbard's Vector Calculus, Linear Algebra, and Differential Forms. Students were required to master 26 classic proofs, to present them online or in person to a staff member or classmate, and to acquire competency in LaTeX.

Weekly two-hour classes were devoted to student presentations of key definitions and theorems and to problem solving in small groups. Theo was a member of one of my sections, in which he did a couple of nice presentations.

The first four weeks of the course were devoted to linear algebra, up through eigenvalues and eigenvectors. Theodore had a score of 50 out of 50 on the examination.

The next four weeks were devoted to single-variable real analysis. We covered Real Analysis: the Theory of Calculus, by Kenneth Ross, almost cover-to-cover. Theodore scored 49.75 out of 50 on the examination.

The final five weeks covered multivariable real analysis and differential calculus, up through manifolds and Lagrange multipliers. Theodore scored 60 out of 61 on the final examination on this material.

When everything was totaled (including some extra credit), Theodore had an average of 100.6%, which, led to a grade of A.

Overall, 195 students enrolled for credit in Math 23a and E-23a last fall. Within this group, Theodore ranked #7.

Feel free to contact me by email at bamberg@tiac.net if you need additional information.

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