

## Advanced Calculus with Financial Engineering Applications

### Student Feedback, 2012-2015

This is a very useful seminar which combines mathematics and practical finance. It's very different from the traditional math courses which provide with comprehensive fundamental proof. I would like to strongly recommend these seminars for math students who want to know about financial engineering.

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Having a very limited background in mathematics, I was unsure about my experience but found that the course was very well put together and I learned a lot from it.

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Outstanding program by all accounts. Covers an exceptional amount of material in thorough fashion over a remarkably short period of time.

Intellectually stimulating, challenging, and well structured.

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The course was excellent! My fellow classmates were driven, smart, and incredibly helpful. Dr. Stefanica really cares about making sure you understand the material. He does a wonderful job of explaining the theory and relating it to the real world. My TA's were fantastic as well; they were quick to answer any questions and always ready to clear up any confusion. I would highly recommend this course to anyone looking to get a first look into Financial Engineering.

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The seminar is very practical and helpful, laying a good foundation for the further study of financial engineering. I had a great experience in the seminar, and absolutely learned a lot from the seminar, sincerely thanks to the very helpful and friendly instructor and TAs :)

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Dan is a great teacher. He is really patient and precise to any content within the material. The course is not only about calculus, but a very detailed introduction of their financial applications. I found it extremely useful for who want to step in this field with other background. I feel really lucky to attend to this seminar.

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Excellent! I hadn't taken a math class in a long time, and I found this seminar to be an excellent review. I also learned a few things that I didn't cover before in my previous studios. The HW questions were very good.

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Very rigorous course with very enlightening concepts. Very good instruction incorporating real life instances/historical references.

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I thought it was an excellent course taught at a great pace. I had previously self-studied some of these topics by reading parts of Hull, Joshi and Shreve, but this course and the textbook approach things slightly differently by establishing the mathematical concepts separately to, but alongside, the practical application. I also liked the use of the forum and thought I was left with an overall very positive impression of the atmosphere at Baruch College and the experience that its MFE program would offer.

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It was one heck of a course. Once I got the hang of Prof. Stefanica's pace, I became addicted to everything about this program - the forum, classes, TAs, homework, programming, exam. Students were from various backgrounds and interacting with them was a rich experience. I was surprised to see how much attention Dan gives to each individual. TAs John and Mathew were super helpful. Thank you for everything.

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The teacher and TAs are excellent. I like about the homework, which combine mathematics questions and programming questions. I had a great experience and I will apply for the part-time MFE program!

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The material was interesting, as expected from Dan's class.

The most challenging for me was the programming part which I found the C++ seminar helped me a lot.

Personally, I feel the TAs were a bit strict especially with the accuracy of the results. However, it was a part of the learning and I appreciated their time helping us with the homework.

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One of the best courses I attended. The course pace is right, the content is entertaining if you love the subject. But the best part of the course is Dan. He is a great teacher.

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Best course I have ever taken out of about 100 others in my long learning experience. I mean, to have a well-written book specifically tailored for the course as an introduction to financial mathematics - never

could find such. Easy to read book, well ""chewed out"" solution manual. Recommend to everyone as a reference to brush up on calculus and FE basics. Dan is fantastic teacher, hard not to understand the material, if you have a question, his laconic explanation hits the nail on the head.

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The contents of the course are designed such that each important math topic (calculus, calculus-based probability, linear algebra, numeric methods, etc.) is reviewed in a separate chapter which also contains financial applications of the mathematics just discussed. The topics are selected with care and explained clearly. As such, the book is a unique blend of everything an MFE student should know before entering the program. Homework assignments (as well as the exam) cover both pure math questions and finance applications.

There are also very nice sets of problems at the end of each chapter and solutions to these problems can be found in the solutions manual (separate book.) All problems have been chosen thoughtfully and are often similar to questions raised in job interviews.

Because many of the problems discussed in the course involve numeric methods or can be automated with the help of a computer code, there is an emphasis on writing codes for certain problems and a part of the final exam is also allocated to modifying and running codes and submitting the outputs. This inclusion of coding in a course that primarily covers math topics and finance applications is a brilliant prelude to a Master's in Financial Engineering program: a program that is the fusion of math, finance, and computer science.

There is also an online forum where students can discuss homework-related issues and share their perspectives on the problems and where TAs answer questions raised. Using the forum, students can always stay in touch and seek support whenever they need clarification or help on an assignment.

All in all, the course is a great experience and a very useful refresher for people who are interested in applying to any MFE program. The lectures are interesting and presented in a fun environment uncommon in many other math and science environments.

I highly recommend taking this course to the following three groups:

- (A) those who wish to refresh or bridge in gaps in math;
  - (B) those who are of a math, physics or engineering background and wish to see how their math background can be used in the finance world as well as those with a finance background who wish to better understand the mathematics behind finance applications; and
  - (C) anyone who is considering applying to an MFE program.
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Professor Rados Radoicic is an excellent teacher. He is super patient with us and explained everything as clear as he can. I have learned a lot from this seminar. He will look at most of the students' eyes and

make sure everyone is understanding what he is talking about. The seminar is intense every class. I don't have suggestions for this seminar, it's that good. I will highly recommend to the people who has interest on this.

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Great seminar! The material covered was very interesting and challenging, especially the financial application part. The professor is so helpful, dedicated and humorous. TAs are helpful too, both on the forum and in class. This seminar should be useful for both prospective applications to financial engineering program and people who are working in related field. I really enjoyed this seminar.

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I really liked the nice amalgamation of Calculus and Finance. Through this balanced blend, i got knowledge of both subjects in a single seminar. Moreover the co-operation and presentation of Rados made this seminar a complete package. I'm really impressed with professionalism of Rados and our TA's John and Mathew.

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Attending this informative seminar gave me a impression that how Financial Engineering in Baruch can add so much value to my career. And I look forward to attend other Seminars presented by Baruch. Thanks a lot to all of you who made my learning experience so pleasant.

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The course material is very useful and covers most of the important areas for quantitative finance basics. The instructor is very knowledgeable and the instruction is very clear. The way he can teach so much material in such a short period and still make everything clear and understandable is very impressive. TA is very responsible and helpful. Overall the learning experience is great and I would say it's the best course I have ever taken.

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The topics covered in the seminar are very related to financial applications. I like the programming part a lot. Prior attending the seminar, I had no experiences in programming at all. I never thought i could be interested in coding. After completing the program, I am already able to independently design and write programs in R. Thanks to Baruch Pre-MFE program!

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The course was intense, but well organized and very well taught by Rados. John and Matthew were very helpful outside the class. I think the forum is a great way to ask our peers for an advice and check what is wrong in the homework. I haven't practice math for 10 years, which was my disadvantage, but Rados along with TAs helped me to remember most of the materials. Wish it would be a little bit extended, but overall it's great.

