



2023-24

MATA34

Calculus for Management

RESOURCE DOCUMENT

Management and Economics Students Association
(MESA)



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Course Description

Course Topics:

- Course Introduction. Mathematics of finance: compound interest, present and future value, effective rate, equations of value (Sections 5.1 and 5.2)
- Limits and continuity: limits at a point, infinite limits/limits at infinity, continuity (Sections 10.1 – 10.3).
- Differentiation: the derivative and tangent line concepts, differentiation rules, interpretation of the derivative in economics/business, the marginal concept (Sections 11.1 – 11.5)
- Additional topics in differentiation continued: elasticity of demand, implicit differentiation, logarithmic differentiation, Newton's method, higher derivatives (Sections 12.3 – 12.7)
- Applications of derivatives and curve sketching: monotonicity, extrema, extrema on a closed interval, applications in economics, concavity, derivative tests, asymptotes, curve sketching (Sections 13.1 – 13.5)
- Integration: the indefinite integral, integration with initial conditions, applications in economics, elementary techniques of integration (Sections 14.2 – 14.4)

Textbooks:

Introductory Mathematical Analysis for Business, Social and the Life Sciences, 14th edition by Haeussler, Paul, and Wood

- Can get the textbook from the UTSC Bookstore or from an older student



Evaluation & Grading:

<u>Component</u>	<u>Weight</u>
Beginning Test	10%
Term Test 1	20%
Term Test 2	20%
Final Exam	50%

Difficult Topics to Look Out For

- Integration
- Summation
- Matrices

Prof Q&A

Not available, but will be updated when content becomes available to us!

Student Q&A

How do you access the textbooks for this specific course (Eg. bookstore, buy online, upper year students)?

- Upper year students who already have the textbook
- UofT bookstore

What were easy topics within this course?

- Linear Programming
- Matrices
- Derivatives



What are some aspects of the course that are most important to pay attention to? (E.g. lectures, textbook readings, etc.)

- Lectures
- Past exams
- Textbook practice questions

How does the prof typically use the class time (e.g. consistently ends 1 hour early? Could be used for scheduling purposes)

- Uses full class time for teaching

Is there break time during the lectures?

- Yes, usually a 10 min break in the middle of the lecture

How much of your attention/time did this course need relative to other first-year courses for you?

- A lot of time, some students would even put as much as 7-10 hours a week for this course

Did you need any external help e.g. study groups for MATA32/33 or was it self-contained?

- Students were able to study on their own for the most part, but would also get help from other classmates and the TAs

What's one way you would reapproach MATA32/33 if you could redo it?

- Ask questions during lectures if you are lost
- Go to the office hours
- Do more practice questions and practice exams
- Attend and keep up with all the lectures

Did this course get you more interested in the field of study as a potential career path?

- For students who did become more interested in calculus, they ended up also becoming more interested in quantitative courses as a whole



Were the midterms/exams tricky or was the content on it fairly predictable? Extension: how much did studying previous midterms/exams help for this course?

- The midterms are usually fairly predictable, but the finals are tough

Resources

Helpful YouTube Channels:

- The Organic Chemistry Tutor
- Nancy Pi

Textbook Cover:

