

Course Syllabus, Lecture, Tutorial/Quiz Schedule

Lecture Schedule

1. **Lectures 1 and 2** Mathematics of finance: compound interest, present and future value, effective rate, equations of value (Sections 5.1 and 5.2).
2. **Lectures 3 and 4** Continuously compounding interest, effective rate, annuities, amortization (Sections 5.3 – 5.5). Section 1.6 on summation notation is relevant). We only study page 228 of section 5.5. Omit amortization schedule concept on page 229 and omit memorization of annuity formulas on page 229.
3. **Lectures 5 and 6** Limits and continuity: limits at a point, infinite limits/limits at infinity, continuity (Sections 10.1 – 10.3). Omit section 10.4.
4. **Lectures 7 and 8** Differentiation: the derivative and tangent line concepts, differentiation rules, interpretation of the derivative in economics/business, the marginal concept (Sections 11.1–11.5). Omit technical proofs on pages 501, 502, 505, 518, and 521. Some additional topics in differentiation: derivatives of logarithm and exponential functions (Sections 12.1, 12.2)
5. **Lectures 9 and 10** Additional topics in differentiation continued: elasticity of demand, implicit differentiation, logarithmic differentiation, Newton's method, higher derivatives (Sections 12.3 – 12.7). Omit the technical proof on page 540.
6. **Lectures 11 and 12** 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). Omit oblique asymptotes on pages 602 – 603.
7. **Lectures 13 and 14** Applications of derivatives continued: curve sketching continued, applied word problems in economics and management (Sections 13.3 – 13.6).
8. **Lectures 15 and 16** Integration: the indefinite integral, integration with initial conditions, applications in economics, elementary techniques of integration (Sections 14.2 – 14.4). Omit section 14.1.
9. **Lectures 17 and 18** Techniques of integration continued: substitution, manipulations, integration by parts, applications in economics (Sections 14.4, 14.5, 15.1).
10. **Lectures 19 and 20** The definite integral, fundamental theorem of calculus, area beneath a curve, applications in economics (Sections 14.6, 14.7, 14.9) Omit section 14.8.
11. **Lectures 21 and 22** Area between curves, vertical and horizontal elements. (Section 14.9).
12. **Lectures 23 and 24** Areas between curves continued, Consumers' and producers' surplus (Section 14.10).

Note: Since lecture sections of MATA32F starts on different days, your lectures n and $n + 1$ may be in a different week than someone else's lectures n and $n + 1$. Also, there may be some times when lectures may deviate a little from the schedule above.

Tutorial/Quiz Schedule

There are no tutorials or quizzes up to and including Friday Sept 9.

1. Mon Sept 12 - Fri Sept 16: Tutorial 1, No Quiz
2. Mon Sept 19 - Fri Sept 23: Tutorial 2, Quiz 1
3. Mon Sept 26 - Fri Sept 30: Tutorial 3, No Quiz
4. Mon Oct 3 - Fri Oct 7: Tutorial 4, Quiz 2
5. Mon Oct 10 - Fri Oct 14: No lectures or tutorials (Thanksgiving/Study Week)
6. Mon Oct 17 - Fri Oct 21: Tutorial 5, Quiz 3
7. Mon Oct 24 - Fri Oct 28: Tutorial 6, No Quiz
8. Mon Oct 31 - Fri Nov 4: Tutorial 7, Quiz 4
9. Mon Nov 7 - Fri Nov 11: Tutorial 8, No Quiz
10. Mon Nov 14 - Fri Nov 18: Tutorial 9, Quiz 5
11. Mon Nov 21 - Fri Nov 25: Tutorial 10, No Quiz
12. Mon Nov 28 - Thur Dec 1: Tutorial 11, No Quiz

Notes: You can only write a quiz in the tutorial you are formally registered in. If you do otherwise, your score will be 0 on that quiz. It is quite possible that our Midterm Test will occur in a week that you have a quiz in your tutorial. Students who normally have a tutorial on a Friday can attend any tutorial in the week of Mon Nov 28 - Thur Dec 1.