



**Mathematics/Economics 337 “Financial Mathematics”, Spring 2009 (Jan 12 – May 8).**

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**Lecture:** Monday, Wednesday, and Friday (except Jan 19, Mar 19/23/25/27) in ROLLA-G5 from 3 to 3:50 in the afternoon. The web site for this class is

“<http://web.mst.edu/~bohner/math337-09/math337.html>”.

**Office Hours:** Tuesday and Thursday in ROLLA-106 from 10:50 to noon in the morning. Also by appointment. Appointments may be scheduled in person, by phone, or via e-mail.

**Text:** “Options, Futures, and other Derivatives” by John C. Hull, seventh edition.

**Description:** Risk-free assets, interest rates, risky assets, discrete time market models, portfolio management, forward and futures contracts, interest rate futures, swaps, options, options pricing, binomial trees, Cox–Ross–Rubinstein analysis, Black–Scholes–Merton model, Wiener processes, Itô’s lemma, financial engineering, options on stock indices, options on currencies, options on futures, the Greek letters, volatility smiles, basic numerical procedures, exotic options.

**Homework Assignments:** There will be 11 weekly homework assignments. They are available in class (and as PDF Files on the lecture’s web site). Homeworks will be collected and selected problems will be graded. Instead of collection of homeworks, there may be a quiz during class on the homework material.

**Hour Exams:** There will be 3 exams during class. These exams will be announced at least one week in advance.

**Final Exam:** The final exam is comprehensive and will be on Tuesday, May 12, from 10:30 in the morning until 12:30.

**Attendance Policy:** You are expected to attend every class period. If you know in advance that you will not be able to attend, let me know.

**Grading Policy:** Each of the eleven homework assignments is worth 50 points, each of the three hour exams 80 points, and the final exam 210 points. Hence the emphasis on the final amount of points is weighted as follows:

Homework	Hour Exams	Final
55%	24%	21%

Altogether 1000 points are available. If  $p$  is the final amount of points, the final grade will be determined according to the following table (as a final grade of “D” is not allowed for a graduate student, for them the level to pass is 650):

F	D	C	B	A
$p < 600$	$600 \leq p < 700$	$700 \leq p < 800$	$800 \leq p < 900$	$p \geq 900$