**MATH 133A – Suggested Syllabus**

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| **Week** | **Chapter** | **Topics** |
| 0 |  | **Introductions** |
| 1 | 1 | **Introduction to derivatives:** what is a derivative, an overview of financial markets, the role of financial markets, the uses of derivatives, buying and short-selling financial assets |
| 2 | 2 | **Introduction to Forwards and Options:** forward contracts, call options, put options, summary of forward and option positions, options are insurance, equity linked CD’s |
| 3 | 3 | **Insurance, Collars, and Other Strategies:** basic insurance strategies, put-call parity, spreads and collars, speculating on volatility |
| 4 | 4 | **Introduction to Risk Management:** basic risk management from the producer’s perspective, basic risk management from the buyer’s perspective, why do firms manage risk, selecting the hedge ratio |
| 5 | 4 (cont.) | **Introduction to Risk Management:** basic risk management from the producer’s perspective, basic risk management from the buyer’s perspective, why do firms manage risk, selecting the hedge ratio |
| 5 |  | **Midterm Exam (6:00pm – 7:00pm)** |
| 6 | 5 | **Financial Forwards and Futures:** alternative ways to buy a stock, prepaid forward contracts on stock, forwards contracts on stock, futures contracts, uses of index futures, currency contracts, Eurodollar futures |
| 7 | 5 (cont.) | **Financial Forwards and Futures:** alternative ways to buy a stock, prepaid forward contracts on stock, forwards contracts on stock, futures contracts, uses of index futures, currency contracts, Eurodollar futures |
| 8 | 7 | **Interest Rate Forwards and Futures:** bond basic, forward rate agreements, Eurodollar futures, and hedging, duration and convexity |
| 9 | 8 | **Swaps:** commodity swaps, computing the swap rate in general, interest rate swaps, currency swaps, swaptions, total return swaps |
| 10 | 8 (cont.) | **Swaps:** commodity swaps, computing the swap rate in general, interest rate swaps, currency swaps, swaptions, total return swaps |
| 11 |  | **Final Exam** |

**Textbook**: *Derivatives Markets by Robert L. McDonald, 3rd Edition*