**MA 109-6 Fall 2018 Tentative Schedule 41 classes**

Mon Tue Thurs

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| Aug 27  syllabus, WeBWorK,  0.1 functions and graphs | Aug 28  WeBWorK,  0.2 important functions | Aug 30  0.3 algebra of functions,  0.4 zeros of functions |
| Sept 3  Labor Day  No class | Sept 4  0.5 exponents and power functions,  0.6 functions and graphs in applications | Sept 6  graphs and zeros with calculator and Mathematica, 1.1 slope of a line |
| Sept 10  1.2 slope of a curve at a point | Sept 11  1.3 the derivative and limits,  1.4 limits and the derivative | Sept 13  1.6 differentiation rules |
| Sept 17  derivatives with calculator and  Mathematica | Sept 18  1.7 more about derivatives  (second derivative) | Sept 20  1.8 derivative as a rate of change, approximations, review |
| Sept 24  **Exam 1**  chapters 0, 1 (but not 1.5) | Sept 25  1.5 differentiability and continuity,  2.1 graphs of functions | Sept 27  2.2 first and second derivative rules |
| Oct 1  2.3 first and second derivative tests and curve sketching | Oct 2  2.4 curve sketching conclusion, asymptotes and limits at infinity | Oct 4  2.5 optimization |
| Oct 8  max/min with calculator  and Mathematica | Oct 9  2.7 applications to business,economics; 3.1 product and quotient rules | Oct 11  3.2 chain rule and general power rule |
| Oct 15  Fall Break  No class | Oct 16  Fall Break  No class | Oct 18  3.3 implicit differentiation,  review |
| Oct 22  **Exam 2**  chapter 2, plus 1.5, 3.1, 3.2 | Oct 23  3.3 related rates,  4.1 exponential functions | Oct 25  4.2 the exponential function ex |
| Oct 29  4.3 differentiation of exponential functions | Oct 30  4.4 natural log function ln(x) | Nov 1  4.5 derivative of ln(x),  4.6 properties of ln(x) |
| Nov 5  4.6 logarithmic differentiation | Nov 6  5.1 exponential growth and decay | Nov 8  5.2 compound interest,  review |
| Nov 12  **Exam 3**  chapters 3, 4 | Nov 13  5.3 application of ln(x) to economics | Nov 15  5.4 further exponential models,  6.1 antiderivatives |
| Nov 19  areas and Riemann sums | Nov 20  definite integrals and  the fundamental theorem | Nov 22  Thanksgiving break  No class |
| Nov 26  more on definite integrals,  integration challenges | Nov 27  6.4 areas in the xy plane | Nov 27 9  areas with calculator and  Mathematica |
| Dec 3  **Mini-Test on Integration**  (sections 6.1 through 6.4) | Dec 4  6.5 applications of the definite integral, 9.1 integration by substitution | Dec 6  Mean Value Theorem,  review |

**Final Exam: Wed, Dec 12, 11:00 am - 1:00 pm** Last revised: 8/23/2018