

Proposed New Syllabus (3 tests) Math 141 Spring 2020

Week 1 Jan 6

- .4 Parametric Equations
- Instruct students to review on their own earlier sections
 - .1 sets and interval notation
 - .2 Conic Sections
 - .3 Functions includes polynomial, rational, exponential, logarithmic and trigonometric functions
- 1.1 Limits (overview and review sections)
- 1.2 Definition of Limits and Properties

Week 2 Jan 13

- 1.3 Continuity
- 1.4 Average Rate and Velocity
- 2.1 Definition of Derivative

Week 3 (Martin Luther King Jr. Day) Jan 21

- 2.2 Power Rule; lots of rules of derivatives
- 2.3 Product & Quotient Rules
- 2.4 Trigonometric Functions' Derivatives
(Chinese New Year Saturday, January 25th)

Week 4 Jan 27

- 2.5 Chain Rule
- Review
- **Test 1 Thursday recitation Jan 30**
- 2.6 Implicit Differentiation (part 1) Going over implicit differentiation of equations (implied functions)

Week 5 Feb 3

- 2.6 Implicit Differentiation (Part 2) Proofs of inverse trig functions; exponential and logarithmic functions' derivatives
- 2.6 Implicit Differentiation (Part 3) Log differentiation; generalized power rule proven.
- 2.7 Related Rates

Week 6 Feb 10

- 3.1 Newton's Method and Linearizations
- 3.6 (differentials part)

Week 7 Feb 17

- 3.2, 3.3 Extrema, Increasing, Decreasing, Concavity, Graphing
- 3.4 Optimizations

Week 8 Feb 24

- 3.4 Optimizations
- 3.5 L'Hopital's rule
- 3.6 (Antiderivatives part)

Week 9 Mar 2

- Review Related Rates & Optimizations
- Overall review day
- **Test Thursday, March 5th**
- Friday – optional extra day; maybe test Friday for students who prefer the extra day to study for this one (?)

Spring Break Week Mar 9th

Week 10 Mar 16

- 4.1 Areas and Riemann Sums
- 4.2 Definition of Definite Integral

Week 11 Mar 23

- 4.3 Fundamental Theorem of Calculus Part 1
- 4.3 Fundamental Theorem of Calculus Part 2

Week 12 Mar 30

- 4.4 Integration by substitution
- 4.5 Integration by Parts

Week 13 Apr 6

- Review Integration techniques;(mixed up sets of problems)
- Overall Review
(Note: Passover begins at sundown April 8th so some students may observe this holy day)
- **Test #3 Thursday April 9th**
- Friday is Good Friday (not a university holiday but again some students may observe this holy day)

Week 14 Apr 13

- 5.1 Areas between curves
- 5.2 Volumes of Revolution (disks and washers method)
- 5.2 Volumes of Revolution (shells method)

Week 15 Apr 20 (last day of class Thursday, April 23)

- Review all week; (give any make up tests needed from the semester)
(Note: Ramadan begins Sundown, April 23; some students may observe this holy day)
- Recitation for review and possibly set up review session or office hours for the reading day which is Friday, April 24th

Exams start April 27th ; grades due May 7th