

MATH 150/155

Click on the following links to navigate to single variable calculus topics at MIT opencourseware:

Limits and continuity, derivatives and differentiation rules:

<http://ocw.mit.edu/courses/mathematics/18-01sc-single-variable-calculus-fall-2010/part-a-definition-and-basic-rules/>

Implicit differentiation and derivatives of exponential and hyperbolic functions:

<http://ocw.mit.edu/courses/mathematics/18-01sc-single-variable-calculus-fall-2010/part-b-implicit-differentiation-and-inverse-functions/>

Linear and quadratic approximation, curve sketching:

<http://ocw.mit.edu/courses/mathematics/18-01sc-single-variable-calculus-fall-2010/part-a-approximation-and-curve-sketching/>

Optimization, related rates and Newton's method:

<http://ocw.mit.edu/courses/mathematics/18-01sc-single-variable-calculus-fall-2010/part-b-optimization-related-rates-and-newtons-method/>

The mean value theorem, antidifferentiation and differential equations:

<http://ocw.mit.edu/courses/mathematics/18-01sc-single-variable-calculus-fall-2010/part-c-mean-value-theorem-antiderivatives-and-differential-equations/>

The definite integral and the first fundamental theorem of calculus:

<http://ocw.mit.edu/courses/mathematics/18-01sc-single-variable-calculus-fall-2010/part-a-definition-of-the-definite-integral-and-first-fundamental-theorem/>

The second fundamental theorem of calculus, area and volume:

<http://ocw.mit.edu/courses/mathematics/18-01sc-single-variable-calculus-fall-2010/part-b-second-fundamental-theorem-areas-volumes/>

Average value, probability and numerical integration:

<http://ocw.mit.edu/courses/mathematics/18-01sc-single-variable-calculus-fall-2010/part-c-average-value-probability-and-numerical-integration/>

Integrals involving powers of trig functions, trig substitutions and completing the square:

<http://ocw.mit.edu/courses/mathematics/18-01sc-single-variable-calculus-fall-2010/part-a-trigonometric-powers-trigonometric-substitution-and-completing-the-square/>

Partial fraction decomposition, integration by parts, arc length and surface area:

<http://ocw.mit.edu/courses/mathematics/18-01sc-single-variable-calculus-fall-2010/part-b-partial-fractions-integration-by-parts-arc-length-and-surface-area/>

Parametric equations and polar coordinates:

<http://ocw.mit.edu/courses/mathematics/18-01sc-single-variable-calculus-fall-2010/part-c-parametric-equations-and-polar-coordinates/>

L'Hospital's rule and improper integrals:

<http://ocw.mit.edu/courses/mathematics/18-01sc-single-variable-calculus-fall-2010/part-a-lhospitals-rule-and-improper-integrals/>

Taylor series:

<http://ocw.mit.edu/courses/mathematics/18-01sc-single-variable-calculus-fall-2010/part-b-taylor-series/>

The following link navigates to a series of older lectures on single variable calculus from MIT opencoursewars youtube channel:

<http://www.youtube.com/playlist?list=PL3B08AE665AB9002A&feature=plcp>

The following link navigates to video lectures on single variable calculus at NYU opencourseware:

<http://www.nyu.edu/academics/open-education/coursesnew/calculus-I.html>

The following link navigates to a large number of lectures on single variable calculus at Khan academy:

<http://www.khanacademy.org/math/calculus/#math/calculus>