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Math 21B Syllabus Thomas Calculus: Early Transcendentals (12 th Edition) Spring 2010		
LECTURES	SECTIONS	TOPICS
1	5.1	Area and estimating with finite sums
1	5.2	Sigma notation and limits of finite sums
1	5.3	The definite integral
1.5	5.4	The Fundamental Theorem of Calculus
1	5.5	Indefinite integrals and the substitution method
1	5.6	Substitution and area between curves
1.5	6.1	Volumes using cross sections
1	6.2	Volumes using cylindrical shells
1	6.3	Arc length
1	6.4	Areas of surfaces of revolution
1	6.5	Work and fluid forces
1	6.6	Moments and centers of mass
1	7.1	The logarithm defined as an integral
2	7.2	Exponential change and separable differential equations
1	8.1	Integration by parts
1	8.2	Trigonometric integrals
1	8.3	Trigonometric substitutions
1	8.4	Integration of rational functions by partial fractions
1	8.6	Numerical integration
1	8.7	Improper integrals
0.5	11.1	Parametrization of plane curves
1	11.2	Calculus with parametric curves
0.5	11.3	Polar coordinates
1	11.4	Graphing in polar coordinates
<p>Total number of lectures = 25. This leaves time for exams and time adjustments.</p> <p>Optional, if time permits : One lecture on section 11.5 (Area in polar coordinates) and one lecture on section 9.1 (Slope fields, Euler's method)</p>		