



Course description

Course No.	1900826W	College	Science	Dept.	Mathematics
Teacher	王彤 (Tong Wang)				
Time	2018.06.25-2018.07.27				
Course Name	English	Calculus I			
	Chinese	微积分 I			
Course credit hours	Total	Theory	Office Hour or Practice		Credits
	60	50	10		4.0
Course description: Describe the nature, academic status, and aims of the course (theory, ability and technique)					
<p>Calculus is a foundational course at MIT; it plays an important role in the understanding of science, engineering, economics, and computer science, among other disciplines. This introductory calculus course covers differentiation and integration of functions of one variable, with applications.</p>					
Requirements for courses; ability and knowledge in advance					
<p>The prerequisites are high school algebra and trigonometry. Prior experience with calculus is helpful but not essential.</p>					
Course structure explanation:					
<p>Make clear the necessary parts, optional parts, distribution of hours. Courses with experiments or practice are expected to explain credit hours needed, content, scheme and functions.</p>					
<ol style="list-style-type: none"> 1. Concepts of Function, Limits and Continuity 2. Differentiation Rules, Application to Graphing, Rates, Approximations, and Extremum Problems 3. Definite and Indefinite Integration 4. The Fundamental Theorem of Calculus 5. Applications to Geometry: Area, Volume, and Arc Length 6. Applications to Science: Average Values, Work, and Probability 7. Techniques of Integration 					

8. Approximation of Definite Integrals, Improper Integrals, and L'Hôpital's Rule

Teaching methods (Lectures, practice, etc.)

Lectures and self-study

Forms of evaluation and requirements

Structure of the final grade (including presence, class performance,), focus of exam, forms of exam (test, interview, final report, etc)

Homework and final exam

	Name	Publisher	Author	Year	Price
Textbook	Thomas' Calculus (Part I)	Higher Education Press	Finney, Weir, Giordano	2004	