

# SYLLABUS

## SUMMER 2017 SESSION TWO MATH-UA.0123.001 CALCULUS III

### INSTRUCTOR

Liming PANG

Email: Liming@cims.nyu.edu

Office Hours: Mon. 14:00 -- 16:00

Room 1110, Courant Institute of Mathematical Sciences, NYU

### LECTURES

Time: Mon. Tue. Wed. Thu. 11:10--13:15

Classroom: Room LL150, Bobst Library, NYU

### COURSE WEBSITE

<http://cims.nyu.edu/~liming/Calculus3/Calculus3.html>

Lecture Notes will be uploaded to this website after each class. You can also find Homework and Homework Solutions there.

### TEXTBOOK

Essential Calculus :Early Transcendentals (Second Edition) by James Stewart

### GRADING POLICY

Your course score will be determined as the following weighted average:

ITEM	WEIGHT
HOMEWORK	16%
MIDTERM	38%
FINAL	46%

### HOMEWORK

Homework of each week will be divided into two parts, posting on Tuesday and Thursday respectively, and both parts will be collected during lecture on the following Tuesday. There will be 5 sets of homework in total, and the lowest grade among the 5 sets will be excluded when computing total homework grading. Please submit your homework on time. **Late homework shall not be accepted.**

## EXAMS

Midterm: 11:15--13:15 2017 July 20 (Thursday)

Final: 11:15--13:15 2017 August 10 (Thursday)

**We will not be able to accommodate out-of-sequence exams for purposes of more convenient travel, including already purchased tickets. Please note again the date of the exams and plan your travel accordingly.**

If you require additional accommodations as determined by the Center for Student Disabilities, please let your instructor know as soon as possible.

## TENTATIVE SCHEDULE

	Monday	Tuesday	Wednesday	Thursday
Week 1	Vectors in Three Dimension	<b>Independence Day No Class</b>	Equations of lines and Surfaces	Vector Functions, Space Curves
Week 2	Arc Length, Curvature, and Physics	Limits and Continuity of Multi-Variable Function	Graphs, Level Sets, Partial Derivatives	Chain Rule, Linear Approximation
Week 3	Directional Derivatives, Gradient Vector	Optimization	<b>Review</b>	<b>Midterm</b>
Week 4	Double Integrals	Double Integral in Polar Coordinates, Applications	Triple Integrals	Triple Integrals in Cylindrical and Spherical Coordinates
Week 5	Change of Variables	Vector Field and Line Integral	The Fundamental Theorem for Line Integrals	Green's Theorem
Week 6	Stokes' Theorem	Divergence Theorem	<b>Review</b>	<b>Final</b>

## UNDERGRADUATE TUTORING CENTER

There is an Undergraduate Tutoring Center in Mathematics Department: <https://math.nyu.edu/dynamic/undergrad/tutoring/> which provides walk-in help.

If you meet with difficulties when doing exercises, besides discussing with the instructor, you may also visit the tutoring center.