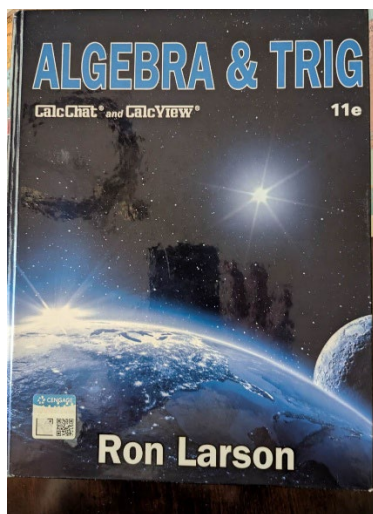


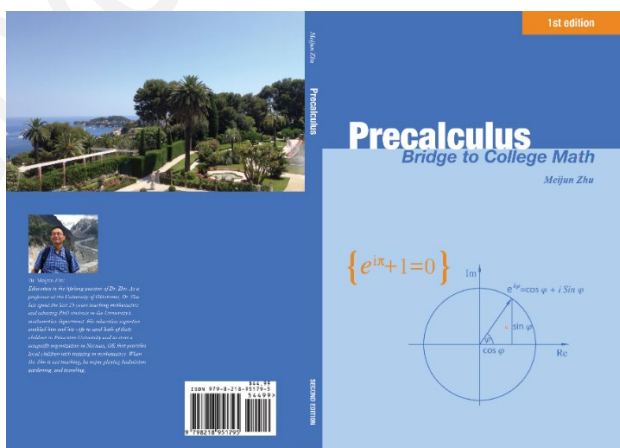
Precalculus course plan

Classroom: Price Hall 2010, Time: 10:30-12:45pm. Office: PHSC 1006, email: mzhu@ou.edu

The Book



1. Assigned book:
2. Reference book (all reasons that you can find from): QA 39.3.Z48



Precalculus Syllabus

(1) Angles and definitions of trigonometric functions

(1a) Algebraic review: ratio, cross-product; Angles in degree and radian. Large angles and negative angles.

(1b) Geometric review: similar triangles, right triangles, Pythagorean identity and Trigonometric functions for acute and obtuse angles

(1c) Trig and right triangles, and the application (could cover Sine and Cosine law here)

(1d) Circle review: Central angles, inscribed angles. General Trig in a unit circle. Quadrant and sign.

(1f) General trig functions and evaluation

(2) Trigonometric functions

(2a) Review, Q&A, and Exam 1.

(2b) Definition, domain, range and geometric properties (odd or even), graphs of Trigonometric functions.

(2c) Basic properties (essentially the definitions and Pythagorean identities) and other Trig functions.

(2d) Sum identities and other Trig identities

(2f) More on trig identity and applications (including: any function over a symmetric interval is the sum of an even function and an odd function)

(3) Trig functions and applications

(3a) Review and exam 2

(3b) Trig functions in a triangle (and in a circle if time permits: complex numbers)

(3c) Trig equations and Inverse trig function

(3d) Inverse trig functions

(3f) Introductory of complex numbers (as the expansion of numbers: how to solve $x^2 = i$, and the operations on vector: addition for complex numbers)

(4) Vector and operations

(4a) Exam 3, Operations on complex numbers and vectors

(4b) Vector operations (dot product and cosine law) and Polar coordinates

(4c) Introduction of number e and limit, how to understand general exponent functions and rules.

(4d) review for the final exam.

(4f) Final exam.

Grading:

Attendance: 5%

Homework/quiz: 15%

Midterm: 45%

Final exam: 35%

90%-100%: A

80%-89%: B

70%-79%: C

60%-69%: D

0%-59%: F