

THE COLLEGE OF STATEN ISLAND, CUNY  
DEPARTMENT OF MATHEMATICS

**MATH 130 – PRECALCULUS  
COURSE OUTLINE**

Text: Stewart, Redlin, Watson, Precalculus, 7th Edition, Enhanced WebAssign Edition.  
Cengage Learning (2016). ISBN# 9781305071759

Calculator: A graphing calculator is required. The TI-84 is highly recommended.

Note: Below, each lesson corresponds to a one-hour class. Homework problems must be submitted online using WebAssign. Problems numbered above 500 are on WebAssign only.

Lesson	Section	Topic	Homework Problems
1	2.1	Review: Functions and Domain	57, 62, 64, 66, 68, 70, 72
2	2.2	Piecewise Defined Functions	37, 38, 45, 46, 50, 78, 81, 82
3	2.3	Analyzing Graphs of Functions	8, 9, 32, 33, 34, 45, 46, 52, 58, 61
4	2.4	Average Rate of Change of a Function	10, 15, 21, 24, 26, 32, 36
5	2.5	Slope as Rate of Change	4, 22, 28, 35, 39, 42, 46
6	2.6	Transformations of Functions	7, 8, 10, 12, 21, 22, 35, 46, 48
7	2.6	Transformations of Functions	63, 65, 67, 68, 74, 77, 78, 85, 88
8	2.7	Combining Functions	16, 20, 22, 26
9	2.7	Composition of Functions	29, 31, 35, 36, 52, 55, 61, 69, 80
10	2.8	One-to-one Functions and Inverses	16, 20, 40, 43, 58, 83, 86, 93, 98
11	2.8	One-to-one Functions and Inverses	
12	3.1	Quadratic Functions	23, 26, 34, 44, 47
13	3.1	Modeling with Quadratic Functions	54, 57, 59, 60, 61, 62, 64, 66
14		Review	
15		<b>Exam 1</b>	
16		<b>Exam 1</b>	
17	3.2	Polynomial Functions and Graphs	8, 10, 27, 32, 50, 58, 68
18	3.2	Polynomial Functions and Graphs	76, 78, 79, 80, 83
19	1.6	Complex Numbers	10, 16, 23, 29, 39, 46, 59, 62, 68
20	3.5	Fundamental Theorem of Algebra	14, 18, 22, 32, 36, 42, 44, 58
21	3.6	Rational Functions	22, 23, 26
22	3.6	Horizontal and Vertical Asymptotes	53, 40, 42, 52, 60, 62
23	3.6	Modeling with Rational Functions	89, 91, 92
24	4.2	Exponential Functions	14, 15, 16, 37, 39

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25	4.3	Logarithmic Functions	16, 24, 34, 67, 69, 87
26	4.4	Logarithmic Expressions	37, 44, 52, 57, 65, 72, 75
27	4.5	Exponential Equations	37, 44, 52, 40, 97
28	4.5	Logarithmic Equations	50, 68, 66, 84, 85, 93, 95
29		Review	
30		<b>Exam 2</b>	
31		<b>Exam 2</b>	
32	5.1	Unit Circle	14, 18, 20, 25, 28, 32, 44, 46, 50
33	5.1	Reference Angle	
34	5.2	Trigonometric Functions	11, 27, 50, 54, 56, 60, 62, 521, 76, 79
35	5.2	Fundamental Trigonometric Identities	
36	5.3	Graphs of Sine and Cosine	20, 28, 30, 34, 37, 40, 46, 48, 52, 86
37	5.3	Transformations of Sine and Cosine	
38	5.4	Graphs of Tangent and Secant	10, 14, 16, 18, 36, 28, 48, 56
39	5.5	Inverse Trigonometric Functions	9, 10, 36, 32, 37, 41, 45, 46
40	5.5	Inverse Trigonometric Functions	
41	5.6	Modeling Harmonic Motion	14, 18, 44, 45, 46, 47, 49
42	5.6	Modeling Harmonic Motion	
43		Review	
44		<b>Exam 3</b>	
45		<b>Exam 3</b>	
46	7.1	Trigonometric Identities	3, 7, 11, 21, 20, 28
47	7.1	Trigonometric Identities	38, 25, 33, 39
48	7.2	Addition and Subtraction Formulas	4, 8, 12, 18, 20, 35, 36, 59, 61, 63
49	7.3	Double-angle, Half-angle, Product-sum Formulas	3, 5, 7, 9, 21, 26, 30, 32, 37, 39, 69, 71
50	7.4	Trigonometric Equations	26, 33, 43, 53, 55
51	7.5	Trigonometric Equations	11, 17, 40, 43, 44
52	11.1	Conic sections: Parabolas	17, 19, 37, 39, 61, 63
53	11.2	Conic sections: Ellipses	23, 25, 49, 50, 65, 67
54	11.3	Conic sections: Hyperbolas	18, 21, 39, 41, 42, 57
55		Final review	
56		Final review	