



North South University

Department of Mathematics and Physics

Semester :
Module : Pre-calculus (MAT 116)
Instructor :

Text Book : Pre-calculus By Michael Sullivan (9th Edition)

Teaching : Lecture, Tutorial (at office hours)

Credit : 3 credit points

Marks Distribution	Midterm -I	20%
	Midterm-II	20%
	Quizzes	15%
	Attendance	05%
	<u>Final Exam.</u>	<u>40%</u>
	Total	100%

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Chapter 1: Graphs

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- 1.2 Graphs of Equations in Two variables; intercepts, symmetry (p 9)
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- 1.4 Circles (p 34)

Chapter 2: Functions and their graphs

- 2.1 Functions (p 46)
- 2.2 The graph of a function (p 60)
- 2.3 Properties of functions (p 68)
- 2.4 Library of functions; Piecewise-defined functions (p 80)
- 2.5 Graphing Techniques; Transformations (p 90)

Chapter 3: Linear and Quadratic functions

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- 3.2 Building linear functions from data (p 128)
- 3.3 Quadratic functions and their properties (p 134)
- 3.4 Quadratic Models; Building Quadratic functions from data (p146)

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Chapter 4: Polynomial and rational functions

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- 4.2 Properties of rational functions (p 188)**
- 4.3 Graph of a rational function (p 199)**
- 4.4 Polynomial and rational inequalities (p 214)**
- 4.5 The real zeros of a polynomial function (p 220)**
- 4.6 Complex zeros; Fundamental Theorem of Algebra (p 233)**

Chapter 5: Exponential and logarithmic functions

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- 5.2 One-to-one functions; Inverse functions (p 254)**
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- 5.5 Properties of logarithms (p 296)**
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Chapter 6: Trigonometric functions

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- 6.3 Properties of trigonometric functions (p 379)**
- 6.4 Graphs of the Sine and Cosine functions (p 393)**
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Chapter 7: Analytic Trigonometry

- 7.1 The inverse Sine, Cosine and Tangent functions (p 436)**
- 7.2 The inverse Trigonometric functions (continued) (p 448)**

Mid-Term and Final Exam syllabus

- Syllabus for Mid-Term I : 1.1-3.2**
- Syllabus for Mid-Term II : 3.3-5.3**
- Syllabus for Final Exam. : All**