

Course Title            **Pre-Calculus**  
Course Number        **MATH 100**  
Section Number(s)    **03 & 04**  
Semester                **Fall**  
Year                      **2013**

Course Description

Basic set theory, functions, and their graphs. Topics from algebra, theory of equations, trigonometry and analytic geometry. Intended to prepare students for a course in calculus. (Meets four hours per week.)

Class Meeting Times

Section 03:	Lecture	9:00 AM – 9:50 AM	TWF	LEO 235
	Computer Lab	9:30 AM – 10:45 AM	R	RLC 107
Section 04:	Lecture	11:00 AM – 12:15 PM	TF	LEO 233
	Computer Lab	11:00 AM – 11:50 AM	WR	RLC 107

Instructor's Name        **Dr. Tyler Markkanen**  
Office Location         **RLC 200A**  
Office Hours             **TBD—See HW 0**  
Contact Information    **tyler.markkanen@manhattan.edu**  
                                       **(718) 862-7831**

Required Textbook for the Course

Axler, S. *Algebra & Trigonometry First Edition*. Must Include WileyPLUS Access.

**Choose one of the following four options.**

**Option 1:**

Stand Alone WileyPLUS  
 ISBN-13: 9780470914625

**Option 2:**

Binder Ready Version (BRV) with WileyPLUS  
 ISBN-13: 9781118088401  
 OR  
 ISBN-13: 9781118088432 (add binder)

**Option 3:**

Purchase WileyPLUS access online. Go to the course website:

Section 03: <http://edugen.wileyplus.com/edugen/class/cls354625/>

Section 04: <http://edugen.wileyplus.com/edugen/class/cls354627/>

Click on Create Account, agree to the terms on the next page, click Continue, choose Buy Course Access, and follow the on-screen instructions.

**Note:** Option 2 is my preference. The most important part in ALL of the options is the **WileyPLUS access**. This gives you access to the online homework system. When logged in, you will get access to the ebook, which is why you can choose Options 1 or 3 (neither of which contains a hard copy of the book). So whichever option you choose, make sure you are getting access to WileyPLUS.

### Subject Material Covered in the Course

We will cover some or all of the sections in each of the following chapters:

- Chapter 1: The Real Numbers
- Chapter 2: Combining Algebra and Geometry
- Chapter 3: Functions and Their Graphs
- Chapter 4: Polynomial and Rational Functions
- Chapter 5: Exponents and Logarithms
- Chapter 6:  $e$  and the Natural Logarithm
- Chapter 9: Trigonometric Functions
- Chapter 10: Trigonometric Algebra and Geometry
- Chapter 11: Applications of Trigonometry

### Outcome Expectations

- Improve problem-solving skills and quantitative literacy
- Master algebra skills
- Manipulate various kinds of functions (e.g., polynomial, exponential, logarithmic, and trigonometric)
- Interpret functions with different representations (e.g., numerically, graphically, analytically and verbally)
- Understand and apply some classical mathematical models and techniques for dealing with and changing quantities
- Prepare for a first course in calculus

### Homework Assignments and Practice Exercises

- For each section of the textbook, there is a list of *suggested exercises* from the book. You are responsible for submitting a subset of those exercises. The homework (HW) due dates will be announced in class and will be displayed on WileyPLUS. Computer lab days are devoted to practice problems and HW/quiz questions (i.e., the full class period on **Thursdays for Sec. 03** or 75 minutes across **Wednesdays and Thursdays for Sec. 04**). Come with questions and comments about past and future HWs and the upcoming quiz. ALL WORK and steps should be clearly shown (in your notebook, or on the homework itself for occasional **handed-in assignments**). Remember, office hours are a good place to get homework help.
- **HW 0:** Logon to the course website on Moodle at <https://lms.manhattan.edu>. Click on the **My Schedule** link. Fill out and submit the schedule form that comes up.  
**HW 0 IS DUE BY THURSDAY 8/29 AT 11:55 PM.**

### Dates and Times of Quizzes and Exams

- **QUIZZES:** There will be a quiz **once a week** (except on the first week of the semester and exam weeks). They will be given **in class** on the following Fridays: 9/6, 9/20, 9/27, 10/4, 10/18, 10/25, 11/8, 11/15, 11/21 (Thursday for last quiz, online).
- **EXAMS:** There will be **four in-class exams** and a **cumulative final exam**. The dates of the exams are shown below.

Exam 1	Friday 9/13
Exam 2	Wednesday 10/9
Exam 3	Friday 11/1
Exam 4	Tuesday 11/26
Final Exam	TBA (Finals are Mon-Sat 12/9-12/14)

### Grading Method, Extra Credit Assignments, and Make-Up Policy

- **GRADE:**

<b>Grade Category:</b>	<b>Percentage of Final Grade:</b>
Class Participation	5%
Homework	20%
Quizzes	15%
Exams (4)	10% (each)
Final Exam	20%

- **EXTRA CREDIT:** There will be occasional extra credit opportunities. Details will be announced as the semester progresses.
- **MAKE-UPS:** Make-up quizzes and exams are generally not allowed unless you tell me **in advance** that you are going to be absent on a quiz/exam day. After solutions to a quiz have been posted, make-ups for that quiz will not be allowed.

### Attendance Policy

You are expected to attend each class. Please come to class prepared and ready to learn. Ask questions and make helpful comments. Be ready to participate in class discussions and activities. If you miss class, you are responsible to get the notes and assignment(s) from someone in the class, as well as any handouts. **You must notify me IN ADVANCE if you will be absent on a quiz/exam day.**

### Expected Academic/Professional Conduct

- All written work must conform to standard English usage. Failure to meet such standards will affect your grade.
- When placed on your assignments, your name verifies that the work is your own.
- All Manhattan College students are expected to maintain the highest standards of academic and personal integrity. Any violations of academic integrity like exam cheating, facilitation of dishonesty, plagiarism, i.e. copying from any source (classmates, published sources, internet) for an assignment without proper quotation and citation, will be dealt with in accordance with the student handbook of Manhattan College and will result in disciplinary penalties.

### Students with Disabilities

Qualified students with disabilities will be provided reasonable academic accommodations if determined to be eligible by the Specialized Resource Center. Prior to granting disability accommodations in this course, the instructor must receive written verification of a student's eligibility from the Specialized Resource Center, which is located at Miguel Hall, Room 301B. It is the student's responsibility to initial contact with the Specialized Resource Center staff and to follow the established procedures for having the accommodation notice sent to the instructor.

### The Center for Academic Success

The Manhattan College Center for Academic Success is committed to providing student centered programs and initiatives designed to enhance the learning experience of all students. The Center for Academic Success provides tutoring in a wide range of subjects, including all core courses. Tutoring is designed to support students with their courses by providing content-specific assistance accessed through individual tutoring, study groups, or online tutoring.

The Center for Academic Success is committed to providing the best services to students. All tutors receive ongoing training and certification according to National Tutoring Association standards. This certification fosters an environment of professionalism while providing students with leadership opportunities and recognition for their contributions. National certification also ensures that all peer tutors are kept current regarding best practices in their field of study

Please call 718.862.7414 or email [success@manhattan.edu](mailto:success@manhattan.edu) to make an appointment. Walk-ins are also welcome. For a complete schedule of tutoring, please visit our website at <http://manhattan.edu/academics/center-academic-success>.

### **Center Hours and Locations**

**Learning Center- De La Salle Hall 206**  
Monday – Thursday, 10 A.M. – 7 P.M.  
Friday, 10 A.M. – 3 P.M.

**Leo Learning Center – Leo Hall 117**  
Monday – Thursday, 10 A.M. – 7 P.M.  
Friday, 10 A.M. – 3 P.M.

**Writing Center- Miguel Hall 204**  
Monday – Thursday, 10 A. M. – 7 P.M.  
Friday, 10 A. M. – 5 P.M.

## Assignment List & Schedule

WileyPLUS HWs are the \* exercises.

Exercises without a \* are for WileyPLUS Practices and will be used as quiz items.

**THURSDAY LAB IS “PRACTICE & HW/QUIZ QUESTION” DAY (NO NEW MATERIAL).**

<u>Week</u>	<u>Day</u>	<u>Date</u>	<u>Section</u>	<u>Assignment (DUE DATES TBA)</u>
1	T	8/27	1.1	p. 6: #1, 4, 6, 9*, 10*, 12*, 13*
	W	8/28	1.1 Cont'd	
	F	8/30	1.2	pp. 19-20: #6, 8*, 12, 16, 20*, 24*, 26, 28, 30*, 32, 36, 38, 42*, 62
2	T	9/3	1.3	pp. 33-34: #2, 6, 8*, 14*, 20, 26, 28*, 32*, 34, 36, 38, 42*, 50, 54, 65
	W	9/4	2.1	pp. 50-52: #2, 4, 6, 8, 10, 12*, 14, 18*, 22(a)*(b)*(c)(d), 26, 30*, 38, 40*, 44, 50
	F	9/6	2.2	pp. 66-69: #4, 6*, 8, 10*, 12, 14, 16*, 18, 28, 30, 32*, 34, 36, 40, 42*, 44, 46, 48, 49(a)(b), 57, 61
3	T	9/10	2.3	pp. 88-90: #2, 4, 6, 10*, 12, 16, 18*, 20, 22, 24*, 30*, 40, 42*, 44, 48, 50, 52*, 54
	W	9/11	2.3 Cont'd	
	R	9/12		REVIEW IN LAB
	F	9/13	<b>EXAM 1</b>	
4	T	9/17	3.1	pp. 129-132: #3, 11, 16, 18*, 22, 28, 32*, 34, 48, 52*, 54, 56, 62*, 63, 84, 88*, 98, 99, 104
	W	9/18	3.2	pp. 154-155: #2, 8*, 12, 21, 26*, 34*, 36, 43, 46*, 49, 55, 56*, 62, 74, 75
	F	9/20	3.3a	pp. 174-176: #3, 9, 14*, 15, 26*, 27, 32*, 35, 39, 42*, 44*, 46, 56
5	T	9/24	3.3b	EXTRA CREDIT: p. 176 #61, 65 (Hand in on paper.)
	W	9/25	3.4	pp. 189-191: #4*, 8, 10*, 14, 18*, 20, 22, 32*, 34, 36, 38*, 44
	F	9/27	3.5	pp. 204-205: #2*, 4, 6, 14*, 16, 20, 22*, 28, 30, 32, 34, 36*, 38, 39, 44, 45, 46, 47, 48, 53
6	T	10/1	4.1	pp. 221-222: #4*, 8, 12, 14*, 18, 20, 22, 24, 26, 30*, 32, 40, 42, 46, 50, 52*, 58*, 60, 64, 75, 79
	W	10/2	4.2	pp. 239-241: #2, 6, 10, 14, 16*, 20*, 24*, 26*, 28*, 54
	F	10/4	4.3	pp. 255-256: #4*, 6, 8, 10, 12, 14, 16, 18*, 20, 22, 26, 28*, 30, 32*, 34, 36*, 40, 42*, 44
7	T	10/8		REVIEW
	W	10/9	<b>EXAM 2</b>	
	R*	10/10	5.1	p. 287: #4*, 10, 14, 16, 18*, 20, 24, 28*, 32, 34, 38*, 40*, 44, 48, 50*, 52, 58
	F	10/11	5.1 Cont'd	
8	T	10/15		<i>MONDAY SCHEDULE</i>
	W	10/16	5.2	pp. 301-302: #4, 8*, 26, 30, 38, 42, 58*, 70, 82*, 84, 86, 88, 90*, 92, 94, 98*, 100, 102*, 104
	F	10/18	5.3	pp. 319-321: #10*, 12, 14, 18, 22, 26*, 28*, 34, 38*, 40, 46*, 48, 54*
9	T	10/22	5.4	pp. 340-342: #2, 4, 6*, 8, 10, 12, 14*, 16, 18*, 20, 22, 24, 26, 28*, 30, 32*, 34*
	W	10/23	6.1	pp. 358-359: #8, 10, 12*, 14, 16*, 18, 20*, 22, 24*, 26, 28, 30, 32, 36, 38*, 40, 42, 44, 46*, 48
	F	10/25	9.1	pp. 506-507: #2, 6*, 8, 10, 12*, 16, 18, 20, 22, 24*, 26, 28, 30, 32*, 34, 36*, 38, 40, 42, 44, 46, 48*, 50, 52
10	T	10/29	9.2	p. 523: #2*, 4, 8, 12, 16, 20, 22*, 26, 30*, 34*, 38, 40*, 44*
	W	10/30	9.3	p. 537: #2, 4*, 10*, 12, 14*, 16, 18, 20, 22*, 24, 26, 28*, 30, 32*
	R	10/31		REVIEW IN LAB
	F	11/1	<b>EXAM 3</b>	
11	T	11/5	9.4	p. 549: #2, 4, 6*, 8*, 10*, 12, 16*, 24*, 26, 28, 32, 36*, 38, 40
	W	11/6	9.5	pp. 559-561: #2, 4*, 6, 8, 18, 20, 22, 26*, 30, 32, 34*, 40, 50, 54, 56, 58*, 78, 82*, 84, 86*, 88, 90
	F	11/8	9.6	pp. 576-576: #4, 6*, 12, 16, 18, 22*, 24, 28, 34*, 36, 40*, 46, 50*, 56, 58, 62, 66*
12	T	11/12	10.1	pp. 593-594: #2, 4*, 8, 12*, 16, 18, 22*, 24, 26, 36*, 42*, 44
	W	11/13	10.2	p. 608: #2, 4*, 8, 10*, 16, 18, 20*, 24, 26*, 30, 32*, 34
	F	11/15	10.4	pp. 636-637: #2*, 6*, 12*, 14*, 18*, 27*
13	T	11/19	10.5	pp. 650-651: #4, 6*, 10, 14, 18*, 22, 32, 42*, 44, 50, 56, 60*, 64*, 66, 70
	W	11/20	10.6	pp. 662-663: #2*, 4, 8*, 10, 16*, 22, 26*, 32, 34*
	R**	11/21		REVIEW IN LAB
	F	11/22		REVIEW
14	T	11/26	<b>EXAM 4</b>	
	W	11/27		<i>THANKSGIVING - NO CLASSES</i>
	R	11/28		<i>THANKSGIVING - NO CLASSES</i>
	F	11/29		<i>THANKSGIVING - NO CLASSES</i>
15	T	12/3	11.2	pp. 696-697: #2, 4*, 10, 12, 14, 16*, 20, 24*, 28, 34, 38*, 44, 46*, 54, 60, 62*, 66, 70, 76
	W	12/4		FINAL REVIEW
	R	12/5		FINAL REVIEW IN LAB
	F	12/6		FINAL REVIEW

FINALS WEEK: MON-SAT 12/10-12/15 | FINAL EXAM TIME & DATE: TBA

\*Thursday 10/10 is one LAB DAY that has an online lecture to take before class (Section 5.1)

\*\*Thursday 11/21 will have an in-lab online quiz