Math 1113 – Precalculus – 4 Credit Hrs
Section 09, Fall 2017
MWF 9:55-10:45 am Boyd 305; Tu 9:30-10:20; Adamson 227

Instructor: Mr. Ricky Johnson
Office: 106D Boyd Bldg., 1st Floor
E-mail: rjohnson@westga.edu
Office Hours: MW 11:00-12:00, Tu 11:00-1:00; W 5:00-6:00; or by appointment

Prerequisites: A grade of C or better in MATH 1111 or an SAT Math score of at least 500 or an ACT Math score of at least 20. Math Department recommends a minimum ALEKS Placement score of 61 to be successful in the class.

Course Description: This course is designed to prepare students for calculus, physics and related technical subjects. Topics include an intensive study of algebraic and transcendental functions.


CourseDen: I will be using CourseDen at https://westga.view.usg.edu. to post any announcements and all grades – this includes tests, quizzes, final exam, and final grade. Please do not use courseDen to email me, use rjohnson@westga.edu instead.

ALEKS: Work on topics and quizzes will be done online. All students in MATH 1113 are required to have an ALEKS Account. Go to www.aleks.com to purchase an account. To purchase the subscription, you can either buy an access code at the bookstore or pay directly on the website. To activate a subscription on aleks.com, you will need to enter the following course code when you register: Q9ELD-UVJLF. The subscription lasts for 18 weeks and grants you access to an online version of the textbook. Therefore, a physical copy of the textbook is optional. Please use your UWG email address when registering. Detailed instructions on how to enroll in ALEKS are on courseDen. If you currently do not have the funds, you may use the Financial Aid Access Code (see courseDen). This will grant you temporary access for 17 days without having to pay. After 17 days, however, your account will be frozen until payment is made. Please renew the same account, otherwise credit for any work done will be lost.

Supplemental Instruction Hours: This class includes 2 hours per week of optional supplemental instruction. Time/Location TBA.

Calculator: You will need a graphing calculator. Calculators equivalent to the TI-83, 84, 85, and 86 will be allowed on exams as well as scientific calculators. Cell phone calculators, the TI-89 and other equivalent calculators will not be permitted.

Learning Outcomes: Students will be able to demonstrate:

1. An understanding of functions and how to graph functions
2. An understanding of operations on functions including function composition
3. An understanding of functions.
4. An understanding of rational functions and their graphs, including intercepts and asymptotes
5. An understanding of how to find the zeros of a polynomial and how to factor polynomials
6. An understanding of inverse functions and how to find them graphically and algebraically
7. An understanding of the properties of exponential and logarithmic equations
8. An understanding of how to solve exponential and logarithmic equations
9. An understanding of how to find the values of the trigonometric functions from right triangles and circles
10. An understanding of how to graph the trigonometric functions
11. An understanding of how to prove trigonometric identities
12. An understanding of how to use the sum, difference, double-angle and half-angle formulas for sine and cosine
13. An understanding of how to solve trig equations
14. An understanding of how to solve triangle using the law of sines and law of cosines
15. An understanding of how to analyze and solve applied problems

ALEKS modules: There are 11 interactive learning modules that must be completed by the due dates in ALEKS. Each module consists of problems from topics we will cover in class. Once the due dates have passed your score will be calculated based on the number of topics you have mastered. After the due date, you will no longer be able to improve your score for that particular module. The overall score you receive from the modules will NOT be part of your final course grade. However, at the end of the semester, your overall module score may replace your lowest in-class test score (if it is higher.) Note, when you first begin ALEKS, you will need to take the “Initial Knowledge Check.” Do NOT skip this. The better you score on the “Initial Knowledge Check”, the fewer topics you will have to complete in the remaining modules. Extensions for module due dates will not be granted for any reason. However, the lowest module score will be dropped.

Quizzes (ALEKS): There will be 12 quizzes throughout the semester. All but the first quiz will be taken through ALEKS. The first quiz, “Quiz R”, will be a take-home quiz covering review topics from chapter R and chapter 1 from the text. After that, there will be 1 quiz for each module. The quizzes become available to take on the day the module is due. Unlike the modules, the quiz scores WILL be part of your final course grade. These scores will be downloaded to courseDen. Once a quiz becomes available, you will have 2 days to start it. Once a quiz is started, you will have a limited amount of time to complete it. You may attempt each quiz 2 times (highest score is kept). Note, that the quiz scores are NOT factored into your overall module score. Extensions for quiz due dates will not be granted for any reason. However, your lowest 2 quiz scores will be dropped.

Tests: There will be 4 tests throughout the semester. The test dates given below are tentative and are subject to change. At the end of the semester, you may drop your lowest test score and replace it with your ALEKS overall module score. In addition, you may also have your lowest test score replaced with the score you receive on the final exam if higher. If you miss a test, you can use 1 of the previous 2 options to replace it. Therefore, there will be NO make-up tests for any reason (with the exception of participation in university approved activities (eg. athletic events) - and you must notify before the test. There will be no make-ups for the Final Exam for ANY reason.

Practice Problems: In addition to the modules in ALEKS, additional problems from the textbook will be assigned for practice. These do NOT need to be turned in; they are for practice only. They will be labeled “Practice Problems” and listed on CourseDen. It is highly suggested, however, that you work them as they are designed to help you study for the tests.
**Bonus Points (3% added to final grade):**
Homework assignments (from the textbook) will be assigned weekly and due (in most cases) the same day as the module due dates. You can earn up to 3 bonus points for each assignment. To obtain the full 3 points, ALL problems must be completed and work MUST be shown. Most of the time they will NOT be graded for accuracy, although I may spot check problems occasionally. Solutions will be posted on courseDen after the due dates. No late assignments accepted for any reason.

In addition, extra credit points can be earned by attending tutoring. The dates for eligibility will be August 14 – November 17 for a maximum of 15 extra credit points from tutoring.

1. **Center for Academic Success (Room 200 of the University Community Center):** You must attend a 1 hour session of tutoring at the Center for Academic Success for 1 bonus point. The full hour must be attended. You must submit a CAS verification card for tutoring.
2. **Supplemental Instruction:** You must attend 50 minutes of a 1 hour session with our SI leader for 1 bonus point.
3. **Intervention Tutoring:** If you are a High-Risk student, you can attend a 1 hour intervention tutoring session for 1 bonus point. You must sign up with the instructor to be eligible to attend. Results of the prequiz will identify the high-risk students.

**Example:** Student earns 34 out of 51 possible bonus points. \((34/51)*3 = 2\). So 2 points would be added to final grade.

**Grading Policy:** Final grade will be based on the following scale:
\((A=90-100\%, \ B=80-<90\%, \ C=70-<80\%, \ D=60-<70\%, \ F=<60)\).

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
<tr>
<td>4 Tests (tentative dates, subject to change)</td>
<td>60% (15% each)</td>
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<tr>
<td>Test 1 Friday, September 1</td>
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<tr>
<td>Test 2 Friday, September 29</td>
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<td>Test 3 Friday, October 27</td>
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<tr>
<td>Test 4 Wednesday, November 29</td>
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<tr>
<td>Quizzes (ALEKS)</td>
<td>15%</td>
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<tr>
<td>Final (Comprehensive) Wed, Dec 6: 8:00-10:00am</td>
<td>25%</td>
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<tr>
<td>Total</td>
<td>100%</td>
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<tr>
<td>Bonus (added on to final overall average)</td>
<td>+3%</td>
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**Math Tutoring Center:** Located in room 205 on the second floor of the Boyd Bldg, the MTC offers personalized help with math. No appointment necessary, just walk in. However, no extra credit points will be awarded for attending the math tutoring center.

**Attendance:** Attendance is important to do well in this course. Roll will be taken at every class. If you are late and miss the roll, you are absent. If you miss a class, you are still responsible for all material you may have missed including lecture notes and announcements. As stated earlier, there will be NO make-ups for missing a test or the Final Exam.
**Disabilities:** Students with documented disabilities (through West Georgia’s Accessibility Services) will be given all reasonable accommodations. Adjustments needed in relation to test-taking must be brought to the instructor's attention well in advance of the test (at least **one week** prior).

**Other Course Policies:**
1. Cell phones should be set to an inaudible setting or turned off.
2. All electronic correspondence between student and instructor should be by way of your UWG email account.
3. Arriving late and leaving early is discouraged as it is distracting and disrespectful.
4. Additional course policies:
   http://www.westga.edu/assetsDept/vpaa/Common_Language_for_Course_Syllabi.pdf

**IMPORTANT DATES:**

- **First Day of Class:** Wednesday, August 9th
- **Drop Ends:** Friday, August 11th
- **Last Day to Withdrawal with W:** Friday, September 29th
- **Last Day of Class:** Friday, December 1
- **Final Exam:** Wed, December 6: 8:00 am-10:00 am

- **No classes:**
  - Monday, September 4th (Labor Day)
  - Thursday, October 5th (Fall Break)
  - Friday, October 6th (Fall Break)
  - November 20th-24th (Thanksgiving)
<table>
<thead>
<tr>
<th>ALEKS Module</th>
<th>Due Date&lt;br&gt;(Module &amp; EC)</th>
<th>SECTION: (Textbook HW problems for Extra-Credit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>Fri 8/18/17</td>
<td>Ch R/Ch 1: Algebra Review (no EC problems; take-home quiz only – Quiz ‘R’)</td>
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</tbody>
</table>
| 1            | Wed 8/23/17                 | 2.3: Functions and Relations: (#22, 38, 104)  
2.6: Transformations of Graphs: (#16, 24, 48, 50) |
| 2            | Wed 8/30/17                 | 2.7: Analyzing Graphs of Functions and Piecewise Defined Functions: (#24, 32, 50, 90, 102)  
2.8: Algebra of Functions and Function Composition: (#22, 40, 58, 64, 94)  
3.1: Quadratic Functions: (#16, 26, 48)  
3.2: Polynomials: (#16, 20, 40, 50, 60) |
|              | Test 1 --- Friday, 9/1/2017 |                                                 |
| 3            | Wed 9/13/17                 | 3.3: Polynomial Division: (#16)  
3.4: Zeros of Polynomials: (#31, 40, 44, 64)  
3.5: Rational Functions: (#18, 20, 26, 46, 62)  
3.6: Polynomial and Rational Inequalities: (#16, 60, 68) |
| 4            | Wed 9/20/17                 | 4.1: Inverse Functions: (#14, 36, 46, 50)  
4.2: Exponential Functions: (#28, 32, 38, 40, 44, 54, 56, 58) |
| 5            | Wed 9/27/17                 | 4.3: Logarithmic Functions: (#10, 12, 16, 18, 24, 26, 28, 34, 72)  
4.4: Properties of Logarithms: (#32, 36, 38, 56, 58, 62)  
4.5: Exponential and Logarithmic Equations: (#18, 24, 28, 38, 48, 50, 72)  
4.6: Modeling with Exponential and Logarithmic Functions: (#16, 20, 26) |
|              | Test 2 --- Friday, 9/29/2017|                                                 |
| 6            | Wed 10/11/17                | 5.1: Angles and Their Measures: (#26, 40, 42, 46, 50, 58, 68, 70, 74)  
5.2: Right Triangle Trigonometry: (#14, 16, 24, 42, 72) |
| 7            | Wed 10/18/17                | 5.3: Trigonometric Functions of Any Angle: (#10, 16, 18, 24, 34, 38, 40, 44)  
5.4: Trigonometric Functions Defined on the Unit Circle: (#16, 20, 22, 48, 50, 56)  
5.5: Graphs of Sine and Cosine: (#20, 22, 24, 26, 28, 30, 32, 38, 42, 44) |
| 8            | Wed 10/25/17                | 5.6: Graphs of Other Trigonometric Functions: (TBA)  
5.7: Inverse Trigonometric Functions: (#8, 10, 12, 18, 20, 22, 24, 28, 32, 48, 50, 52, 60, 62, 64, 72, 80) |
|              | Test 3 --- Friday, 10/27/2017|                                                 |
6.2: Sum and Difference: (#10, 12, 20, 24, 26) |
6.5: Trigonometric Equations: (#10, 14, 18, 24, 38, 44) |
| (EC only)    | Wed 11/15/17                | 7.1: Applications of Right Triangles: (#6, 18, 20, 22, 28)  
7.2: Law of Sines: (#8, 22, 24, 26, 44)  
7.3: Law of Cosines: (#8, 12, 14, 28) |
| (Module/EC)  | Tues 11/28/17               | 8.1: Polar Coordinates: (#8, 10, 12, 16, 26, 28, 32, 34, 38, 40, 42, 44, 46, 48, 50, 58, 60, 62)  
8.2: Graphs of Polar Equations: (TBA) |
|              | Test 4 --- Wednesday, 11/29/2017|                                                 |