**Syllabus for Math 007 Pre – Calculus**
**Section _____**
**CRN _____**

**Instructor:**
**Online Office:**
**Phone:**
**Email:**
**Office Hours:**
**ALEKS Class Code:**

**Course Description:** Rational and Logarithmic functions; Trigonometry, and Analytic Geometry. Students planning to take Calculus I (156) should take this course. It is not intended for those students planning to take 026; they may take 010 instead. Prereq: A "C" or better in MATH 006, or satisfactory score on Mathematics Placement Examination. This course partially fulfills Core Mathematics requirement. The goal here is developing the student's mathematical foundation in preparation to understand geometric insights into the concepts of differentiation and integration, and applying these concepts to problem solving and "real world applications".

**REQUIRED TEXT**: College Algebra with Trigonometry, Miller & Gerken

**Prerequisites:** A satisfactory grade (C or better) in College Algebra I or a satisfactory score on the mathematics placement exam.

**Schedule of quizzes and exams**: Homework and quizzes _____
Exams:_____
_____
_____

**FINAL EXAM Tuesday, December 6, 3:30-5:30**

**EVALUATION:**

| | | |
|---|---|---|
| ____Exams _____ pts each | | Total_____ |
| ____Quizzes _____pts each | | Total_____ |
| ____Homework _____pts | | Total_____ |
| 1 Final Exam 200 pts | | Total 200 |
| | Grand Total _____ | |

**Grading formula:**

| | |
|---|---|
| _____ | A |
| _____ | B |
| _____ | C |
| _____ | D |
| Below ___ | F |

**Student Learning Outcomes:**

- Represent and evaluate basic mathematical and/or logical information numerically, graphically, and symbolically.
- Interpret mathematical and/or logical models such as formulas, graphs, tables and schematics, and draw inference from them.
- Students will become proficient in techniques of finding zeros of elementary functions, finding angles and their measure, understand the concept of the unit circle, and how to use it to solve real world problems, the use of trigonometric identities.
- Students will learn to find solutions to systems of equations by several methods.
- Students will be introduced to the concept of limits.

**CLASSROOM POLICIES:**

1. *No cell phone or computer usage during class, including texting.* Please turn your ringer off before the start of class and keep your laptop closed.
2. Research has shown that students who regularly attend class tend to do better than those who do not. Please be on time.
3. Please see your instructor for the classroom calculator policy. Some classes do not allow graphing calculators.

**TUTORING AVAILABLE:** Free tutoring is available during the semester at various locations on campus and online. Talk to your instructor for details.

**GRIEVANCE PROCEDURE:** If you have any problems with the policies or rules of this course, discuss your concerns with your instructor. If the two of you are unable to come to an agreement, please contact the course coordinator. If you are still unable to come to a satisfactory arrangement, you may contact the Director of Undergraduate Studies, Dr. McGowan, jmcgowan@howard.edu, and then, finally, the Chair of the Department, Dr. Bourama Toni, bourama.toni@howard.edu.

**Academic Code of Student Conduct (please see Howard University handbook):** No copying, unauthorized use of calculators, books, or other materials, or changing of answers or other academic dishonesty will be tolerated. Cheating will not be tolerated. Anyone caught cheating will receive an F for the course and may be expelled from the university.

**AMERICAN DISABILITIES ACT:** Howard University is committed to providing an educational environment that is accessible to all students. In accordance with this policy, students in need of accommodations due to a disability should contact the Office of the Dean for Special Student Services (202-238-2420, bwilliams@howard.edu) for verification and determination of reasonable accommodations as soon as possible after admission and at the beginning of each semester as needed.

**Statement on Interpersonal Violence:** Howard University takes sexual assault, dating violence, domestic violence, stalking and sexual harassment seriously. If a student reveals that he or she needs assistance with any of these issues, all responsible employees, including faculty, are required to share this information with the University Title IX Office (202-806-2550) or a student can be referred for confidential services to the Interpersonal Violence Prevention Program (IVPP) (202-238-2382) or the University Counseling Services (202-806-6870). For more information, please go to www.CampusSafetyFirst.Howard.Edu

The use of ALEKS as an online homework tool is required. Students who buy their book from the bookstore automatically receive an ALEKS code. Otherwise, students MUST buy their books from the online website, https://www.aleks.com/ . Students will automatically receive an ALEKS code. Students then enter their user information on the website. Then they should enter the ALEKS class code to access their homework assignments.

Online homework due dates follow the class lecture schedule. After a due date has passed, the student will not be able to access the homework assignment, so get started immediately! If you cannot buy your book immediately, your instructor can provide a financial aid code to allow you to get started on the homework. You are expected to purchase your book within the first two weeks.

**COVID-19 STATEMENT:**
The wearing of a face mask in the classroom is **mandatory.** Students will be directed to leave the classroom if a face mask is not worn properly to cover the nose and mouth. Any student who refuses or fails to comply with the University's requirements and precautions against COVID-19, and any other measures the University advances for the safety and protection of the Howard Community, will constitute a violation of the University's Student Code of Conduct and could result in sanctions up to and including expulsion from the University.

An approximate schedule for the course lectures follows (for a MTWF schedule):

| MONTH | DAY | SECTION | TOPIC |
|---|---|---|---|
| AUG | 22 | 3.1 | Polynomial Fns, & App |
| AUG | 23 | 3.2 | Intro to Polynomials |
| AUG | 24 | 3.3 | Div of Polys; Rem & Factor |
| AUG | 26 | 3.3 | Div of Polys; Rem & Factor |
| AUG | 29 | 3.4 | Zeros of Polynomials |
| AUG | 30 | 3.5 | Rational Functions |
| AUG | 31 | 3.5 | Rational Functions |
| SEP | 2 | 3.6 | Rational & Poly Inequalities |
| **SEP** | **5** | | **Labor Day** |
| SEP | 6 | 3.6 | Rational & Poly Inequalities |
| SEP | 7 | 3.7 | Variation |
| SEP | 9 | | REVIEW |
| SEP | 12 | | **EXAM I** |
| SEP | 13 | 5.1 | Angles and Measure |
| SEP | 14 | 5.2 | Right Angle Trig |
| **SEP** | **16** | | **Convocation (10-1)** |
| SEP | 19 | 5.4 | Unit Circle Trig |
| SEP | 20 | 5.4 | Unit Circle Trig |
| SEP | 21 | 5.5 | Graphs of Sin and Cos |
| SEP | 23 | 5.5 | Graphs of Sin and Cos |
| SEP | 26 | 5.6 | Graphs of Other Trig Fns |
| SEP | 27 | 5.7 | Inverse Trig Fns |
| SEP | 28 | 5.7 | Inverse Trig Fns |
| SEP | 30 | | Review |
| OCT | 3 | | **Exam II** |
| OCT | 4 | 6.1 | Fundamental Trig Identities |
| OCT | 5 | 6.2 | Sum & Difference Formulas |
| OCT | 7 | 6.2 | Sum & Difference Formulas |

| | | | |
|---|---|---|---|
| **OCT** | **10** | | **Mental Health Day** |
| OCT | 11 | 6.3 | Double Angle, Half Angle |
| OCT | 12 | 6.4 | Product to Sum, Sum to Prod |
| OCT | 14 | 6.5 | Trig Eqns |
| OCT | 17 | 7.1 | Applications of Right Triangles |
| OCT | 18 | 7.1 | Applications of Right Triangles |
| OCT | 19 | 7.2 | Law of Sines |
| OCT | 21 | 7.3 | Law of Cosines |
| OCT | 24 | 7.4 | Harmonic Motion |
| OCT | 25 | | Review |
| OCT | 26 | | **Exam III** |
| OCT | 28 | 9.1 | Systems of Linear Eqns 2 Var |
| OCT | 31 | 9.2 | Systems in 3 Variables |
| NOV | 1 | 9.2 | Systems in 3 Variables |
| NOV | 2 | 9.4 | Nonlinear Systems |
| NOV | 4 | 9.4 | Nonlinear Systems |
| NOV | 7 | 9.5 | Linear & Nonlin Inequalities |
| NOV | 8 | 9.5 | Linear & Nonlin Inequalities |
| NOV | 9 | 9.6 | Linear Programming |
| NOV | 11 | 9.6 | Linear Programming |
| NOV | 14 | 10.1 | Solving Systems with Matrices |
| NOV | 15 | | Inconsistent/Dependent Sys |
| NOV | 16 | 10.2 | Matrix Operations |
| NOV | 18 | 10.2 | Matrix Operations |
| NOV | 21 | 10.3 | Inverse Matrices |
| NOV | 22 | 10.4 | Cramer's Rule |
| **NOV** | **23** | | **Thanksgiving (half day)** |
| **NOV** | **25** | | **Thanksgiving** |
| NOV | 28 | 10.4 | Cramer's Rule |
| NOV | 29 | 10.5 | Intro to Limits |
| NOV | 30 | | Review |
| DEC | 2 | | **Exam IV** |
| DEC | 6 | | **Final Exam 3:30-5:30** |

** See old finals online.
http://www.coas.howard.edu/mathematics/more_pexams.html