HOWARD COLLEGE

Math 1314

College Algebra

Spring 2027

Instructor: Heather Gohl

Office Location: Newton 116

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Prerequisites: A score of 350 on the TSI Assessment.

Class Meeting Dates/Days/Times: MTWRF

I. Course Description

In-depth study and applications of polynomial, rational, radical, exponential and logarithmic functions, and systems of equations using matrices. Additional topics such as sequences, series, probability, and conics may be included.

II. **Instructional Materials:** *Pencil, colored pencils/pens, paper, binder, Ipad*
Required Text: College Algebra. From OpenStax. This is a free textbook available online at www.openstax.org/details/college-algebra You can also purchase a print version, if you prefer, via online(Amazon).

III. **Course Requirements**

There will be a total of 8 exams each over 2-3 chapters. Also a final exam at the end over all the material. Daily assignments and/or quizzes will also be given for practice.

IV. **Program Outcomes**

- *Critical Thinking Skills - To include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.*
- *Communication Skills - To include effective development, interpretation, and expression of ideas through written, oral, and visual communication.*

- *Empirical and Quantitative Skills - To include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.*

V. **Student Learning Outcomes**

· *Demonstrate and apply knowledge of properties of functions, including domain and range, operations, compositions, and inverses.*

· *Recognize and apply polynomial, rational, radical, exponential and logarithmic functions and solve related equations.*

· *Apply graphing techniques.*

· *Evaluate all roots of higher degree polynomial and rational functions.*

· *Recognize, solve and apply systems of linear equations using matrices.*

VI. **Attendance Policy/Makeup Work**

You are required by the state to be present 90% of the time. Any time you are absent you

are still responsible for the notes and assignments. The completed notes will be available to you and assignments will always post online. If you miss an exam you are responsible for setting up a time during tutorials to come make up the exam.

VII. **Class Assessment/Grading**

70% of your grade will come from 4 exams each nine weeks (One will be dropped at the

end of the nine weeks). 30% will come from the homework assignments (Two minor grades

will be dropped at the end of the nine weeks). You will be using MyMathlab to complete

all of your homework assignments.

VIII. **Course Content and Rigor:** College-level courses may include controversial, sensitive, and/or adult material. Students are expected to have the readiness for college-level rigor and content.

IX. **Confidentiality in Courses:** Any personal information shared by students in college-level courses, either written or verbal, face-to-face or online, is not considered confidential nor does it fall under FERPA guidelines. Students should refrain from sharing information they do not wish to make public knowledge. The instructor reserves the right to report pertinent information to the appropriate administration if s/he feels that the student may be a danger to him/herself or others.

X. **ADA Statement:** Any student who requires special accommodations due to a documented disability under the provisions of the Americans with Disabilities Act is encouraged to contact the Site Coordinator prior to classes beginning but no later than the end of the first two weeks of class.

XI. **Course Calendar**

1. ***A Review of Basic Algebra:*** *Real Numbers, Integer Exponents and Scientific Notation; Rational Exponents and Radicals; Polynomials; Factoring Polynomials; Rational Expressions.*

2. ***Equations and Inequalities:*** *Linear Equations and Rational Equations; Applications of Linear Equations; Complex Numbers; Quadratic Equations; Applications of Quadratic Equations; Other Types of Equations; Inequalities; Absolute Value.*

3. ***Functions and Graphs:*** *Functions and Function Notation; The Rectangular Coordinate System and Graphing Lines; Linear Functions and Slope; Writing and Graphing Equations of Lines.*

4. ***Functions:*** *Graphs of Functions.*

5. ***Polynomial and Rational Functions:*** *Quadratic Functions.*

6. ***Exponential and Logarithmic Functions:*** *Exponential Functions and their Graphs; Logarithmic Functions and their graphs; Properties of Logarithms; Exponential and Logarithmic Equations.*

7. ***Linear Systems:*** *Systems of Linear Equations.*

XII. **Smoking and eCigarettes:** Smoking or other use of tobacco products and use of electronic cigarette devices is prohibited in all Howard County Junior College district facilities and vehicles.

XIII. **Additional Information:**

Cell phones, earbuds, and smart watches are prohibited during class. All cell phones will be put in the phone caddy each day during class. You will need to bring your IPad charged every day to class. No other devices will be allowed.