MATH 1220

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Office Hours: Daily 7am – 7:25, 6th Period Conference, 2:30 – 2:50

Major Text: Carter, Cuevas, Day, Malloy, Bryan, Holliday, Hovsepian. *Precalculus*. Columbus, Ohio; McGraw Hill, 2011

Calculator: TI 83, TI 83 Plus, TI 84
Approach: Each topic is approached in an analytical, graphical, and tabular method. Other technology includes the use of the Smartboard and its functions.

COURSE DESCRIPTION

MATH 1220. College Algebra II: Review of functions and their graphs, linear and quadratic functions, factoring. Polynomial and Rational functions. Review of exponents. Exponential and logarithmic functions and their graphs. Systems of equations, theory of equations.

ASSESSMENTS

- Formative Assessments
- Chapter Summative Assessments **(65%)**
- Final Summative Assessment **(15%)**
- Information Evaluation Skills
- Points earned from homework (100 pts over the entire semester) **(15%)**
- BGP Assessment Test **(5%)**

** Standard Grading Scale 90-100, 80-89, etc

BGP Learning Outcomes:

1. Interpret mathematical models such as formulas, graphs, tables, and schematics, and draw inferences from them.
2. Represent mathematical information symbolically, visually, numerically, and verbally.
3. Use arithmetical, algebraic, and graphical methods to solve problems.
4. Estimate and check answers to mathematical problems in order to determine reasonableness, identify alternatives, and select optimal results.
5. Recognize that mathematical methods are based on assumptions and have limits

BGP learning outcomes will be measured by the BGP Assessment Exam

COURSE CONTENT

1. Further extend and master functions.
2. Ability to compose two functions.
3. Ability to divide polynomials using long division and synthetic division.
4. Ability to use the factor theorem to factor and build polynomials.

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5. Ability to apply the fundamental theorem of algebra and linear factorization theorem.
6. Ability to use synthetic division to find rational zeros of a polynomial.
7. Use Descartes rule of signs and the upper / lower bound theorem.
8. Ability to graph polynomial functions in standard form.
9. Ability to graph rational functions with removable discontinuities.
10. Ability to solve quadratic inequalities, polynomial inequalities and rational inequalities.
11. Ability to understand exponential functions and logarithmic functions and their properties.
12. Ability to calculate simple interest and compound interest.
13. Ability to calculate interest compounded continuously.
14. Ability to solve applications of annuities and amortization.
15. Ability to solve applications of exponential growth and decay.
16. Ability to solve some systems of equations.
17. Ability to communicate using proper mathematical grammar and terminology.
18. Ability to think rationally and use that to solve problems in the real world.