SECTION HEADING

MATH 0100: Higher Algebra III

Description

Higher Algebra III teaches systems of equations in two and three variables, compound inequalities, absolute value equations and inequalities, radical expressions and equations, quadratic equations, exponential and logarithmic functions.

Credits

2

Prerequisite

MATH 0099 or placement by multiple measures

Corequisite

None

Topics to be Covered

1. Solving systems of equations in two and three variables

2. Solving applied problems using systems of equations

3. Sets, inequalities, interval notation, unions, intersections

4. Solving compound inequalities, absolute value equations and inequalities

5. Radical functions and representation as exponents

6. Simplifying and performing operations with radicals

7. Basics of quadratic equations

8. Solving quadratic equations using the quadratic formula and graphically

9. Exponential functions and their applications

10. Logarithmic functions and properties of logarithms

11. Solving exponential and logarithmic equations

Learning Outcomes

1. Graph and use the graph to solve systems of equation in two variables

2. Solve systems of equations in two variables using elimination and substitution

3. Solve system of equations in three variables

4. Set-up and solve applied problems requiring systems of equations in two and three variables

5. Articulate answers in interval notation and set notation using unions and intersections

6. Solve compound inequalities

7. Construct solutions to absolute value equations and inequalities

8. Develop applications for absolute value equations and inequalities

9. Represent radicals as exponents

10. Simplify and express radicals in standard form

11. Perform operations with radicals

12. Manipulate the graphs of quadratics using computer software

13. Solve quadratic equations using the quadratic formula and graphs

14. Perform calculations for applied problems that use quadratic equations

15. Evaluate formulas for the application of exponential functions

16. Conduct computations with exponential and logarithmic functions

17. Apply inverse properties and properties of logarithms to solve exponential and logarithmic equations

Credit Details

Lecture: 2

Lab: 0

OJT: 0

MnTC Goal Area(s): None