Sample Course Schedule: MTH 111Z-Lab

*Recommend that MTH 111Z-Lab be scheduled twice a week, PRIOR to MTH 111Z Lecture Course days/times.

*Instruction/explanation of all Topics will be followed by supplemental worksheets and practice problems on the website: www.myopenmath.com . These assignments are to be completed during class in the form of group work.

*Daily homework assignments will be to finish the above ^ if not completed in class. Students who are absent from class will be responsible for completing the in-class work that they missed as an additional homework assignment.

Week 1

- Day 1
  - Intro to class
  - Topic 1: Evaluating expressions.
  - Topic 2: Factoring out the Greatest Common Factor (GCF)
  - Supports Sec. 1.1, 1.4 (function notation, composite functions) in MTH 111Z Lecture course.
- Day 2
  - Topic 1: Factoring trinomials when a = 1
  - Topic 2: Factoring trinomials when a does not = 1
  - Supports Section 1.2 (finding Domain) in MTH 111Z Lecture course.

Week 2

- Day 1
  - Topic 1: Graphing points on a coordinate plane
  - Topic 2: Graphing lines using 2 points, then finding the slope of the line
  - Supports Section 1.3, 1.5 (average rate of change, transformations) in MTH 111Z Lecture course.
- Day 2
  - Topic 1: Adding & subtracting fractions requires a common denominator!
  - Topic 2: Complex fractions
  - Supports Section 1.4 (composite functions) in MTH 111Z Lecture course.

Week 3

- Day 1 & Day 2
  - Topic: Solving equations!
  - Types of equations include: 1) multiple “x” – having to combine like terms, 2) Distributive Property, 3) quadratic equations (basic), 4) equations with “x” on bottom of fraction.
  - Supports Sections 1.6, 3.8 (inverse functions) in MTH 111Z Lecture course.

Week 4

- Day 1
  - Topic 1: Adding & subtracting polynomial expressions.
  - Topic 2: Multiplying monomials & binomials (Distributive property!)
  - Supports Sections 3.1 (polynomial functions) in MTH 111Z Lecture course.
- Day 2
  - Topic 1: Multiplying binomials using F.O.I.L.
  - Topic 2: Multiplying binomials & trinomials using the “box” method.
  - Supports Sections 3.2 (polynomial functions) in MTH 111Z Lecture course.

Week 5

- Day 1 & Day 2
  - REVIEW of all Topics covered thus far.

Week 6

- Day 1 & Day 2 :
  - Topic: Learning how to use (and have fun with) DESMOS! www.desmos.com
  - Supports Sections 3.3, 3.4, 3.5 (finding solutions for 3rd-4th-5th degree functions) in MTH 111Z Lecture course.

Week 7

- Day 1
  - Topic 1: Factoring by "grouping" and factoring perfect squares.
  - Topic 2: When/how to use the Quadratic Formula
  - Supports Sections 3.5, 3.6 (finding real zeros, imaginary roots) in MTH 111Z Lecture course.
- Day 2
  - Topic 1: Finding intercepts – graphically and algebraically.
  - Topic 2: Asymptotes on a graph – what does it mean to be "undefined"?
  - Supports Sections 3.7, 4.5 (graphing rational & logarithmic functions) in MTH 111Z Lecture course.

Week 8

- Day 1
  - Topic 1: Solving quadratic & cubic equations using order of operations (ex: 4(x-3)^2 +1 = 5)
  - Topic 2: Solving equations with square roots, cube roots.
  - Supports Sections 1.6, 3.8 (inverse functions) in MTH 111Z Lecture course.
- Day 2
  - Topic 1: Converting percents to decimals & vice versa.
  - Topic 2: Vocabulary Review: Principal, balance, APR, credit, debit, annually, quarterly, etc.
  - Supports Section 4.1 (compound interest) in MTH 111Z Lecture course.

Week 9

- Day 1 & Day 2
  - Topic: Exponent Rules!
  - 1) Add exponents when multiplying variables, 2) ← Subtract when dividing, 3) Negative exponents, 4) Fractional exponents, 5) Evaluating exponential formulas
  - Supports Sections 4.2, 4.3, 4.4, 4.6 (exponential functions, logarithms, half-life) in MTH 111Z Lecture course.

Week 10

- Day 1 & Day 2
  - REVIEW of all topics covered in weeks 6, 7, 8, 9

Week 11

- Day 1
  - Peer Tutoring in preparation for MTH 111Z Lecture course Final Exam
- Day 2
  - Course Evaluation