

Mathematics 20- Course Outline

UNIT 1- Linear and Non-linear Relations **14**

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|---|-------|
| 1 Solving Linear Systems of Equations by Graphing | 1 |
| 2 Determining the Number of Solutions to a System of Linear Eqns. | 1 |
| 3 Solving Linear Systems of Equations by Substitution | 1 |
| 4 Solving Linear Systems of Equations by Elimination | 1 |
| Assignment 1 Due: Tuesday September 9th | |
| 5 Applying Systems of Linear Equations Part 1 | 1.5 |
| 6 Applying Systems of Linear Equations Part 2 | 1.5 |
| 7 Solving Linear Systems of Equations with Three Variables | 2 |
| 8 Solving Non-linear Systems of Equations | 2 |
| 9 Graphing Linear Inequalities in Two Variables | 2 |
| Assignment 2 Due: Tuesday September 16th Period 1 | |
| Unit Test: Tuesday September 16th Period 1 | 1 |

UNIT 2- Functions **11**

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|--|-------|
| 1 Review of Functions, Domain and Range | 1 |
| 2 Operations and Functions | 1 |
| 3 Composition of Functions | 2 |
| Assignment 1 Due: Tuesday September 23rd Period 1 | |
| 4 The Inverse of Function Part 1 | 2 |
| 5 The Inverse of Function Part 2 | 2 |
| 6 Zeros of a Function | 2 |
| Assignment 2 Due: Friday September 26th Period 5 | |
| Unit Test: Friday September 26th Period 5 | 1 |

UNIT 3- Quadratic Functions, Equations & Inequalities **14**

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|---|-------|
| 1 Analyzing Quadratic Functions Part 1 | 1 |
| 2 Analyzing Quadratic Functions Part 2 | 2 |
| 3 Equations and Intercepts from the Vertex and the Point | 1 |
| 4 Converting from General to Standard Form by completing the Sqr. | 1 |
| Assignment 1 Due: Friday October 3 Period 1 | |
| 5 Roots of Quadratic Equations- The Quadratic Formula | 1 |
| 6 Roots of Quadratic Equations- The Discriminant | 1 |
| 7 Applications of Quadratic Functions- A Graphical Approach | 2 |
| 8 Applications of Quadratic Functions- An Algebraic Approach | 2 |
| 9 Quadratic Inequalities | 2 |
| Assignment 2 Due: Thursday October 9th Period 3 | |
| Unit Test: Thursday October 9th Period 3 | 1 |

UNIT 4- Polynomial Functions, Equations & Inequalities 18

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|--|---|
| 1 Polynomial Functions | 1 |
| 2 The Division Algorithm and Synthetic Division | 1 |
| 3 The Remainder Theorem and the Factor Theorem | 1 |
| 4 Factoring Polynomial Expressions | 2 |
| 5 Solving Polynomial Equations | 2 |
| Assignment 1 Due: | |
| 6 Graphing Polynomial Functions Part 1 | 2 |
| 7 Graphing Polynomial Functions Part 2 | 2 |
| 8 Graphing Polynomial Functions Part 3 | 2 |
| 9 Polynomial Functions with a Leading Coefficient other than ± 1 | 2 |
| 10 Polynomial Inequalities | 2 |
| Assignment 2 Due: | |
| Unit Test: | |
| | 1 |

UNIT 5- Absolute Value, Radical & Rational Equations 11

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|-----------------------------------|---|
| 1 Absolute Value Equations Part 1 | 1 |
| 2 Absolute Value Equations Part 2 | 2 |
| 3 Radical Equations | 2 |
| Assignment 1 Due: | |
| 4 Rational Functions | 2 |
| 5 Rational Equations | 2 |
| 6 Inverse of a Rational Function | 1 |
| Assignment 2 Due: | |
| Unit Test: | |
| | 1 |

UNIT 6- Mathematical Reasoning 14

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|--|---|
| 1 Inductive Reasoning, Conjectures and Counterexamples | 2 |
| 2 Deductive Reasoning | 2 |
| 3 Connecting Words- "And", "Or", & "Not" | 2 |
| Assignment 1 Due: | |
| 4 Venn Diagrams- Part 1 | 1 |
| 5 Venn Diagrams- Part 2 | 2 |
| 6 If/Then Statements | 2 |
| 7 Direct Proof | 2 |
| Assignment 2 Due: | |
| Unit Test: | |
| | 1 |

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| UNIT 7- Circular Geometry | 11 |
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| 1 Circles and Chords | 1 |
| 2 Circles and Angles | 1 |
| 3 Cyclic Quadrilaterals | 2 |
| Assignment 1 Due: | |
| 4 Circles and Tangents | 2 |
| 5 Polygons | 2 |
| 6 Relations Between Arcs, Sectors, and Angles | 2 |
| Assignment 2 Due: | |
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| Unit Test: | 1 |
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| UNIT 8- Coordinate Geometry & Trigonometry | 12 |
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| 1 Coordinate Geometry Review | 1 |
| 2 Distances Between Points and Lines | 1 |
| 3 Distances Between Parallel Lines | 1 |
| 4 Coordinate Geometry and the Circle | 2 |
| 5 Equation of a Circle | 2 |
| Assignment 1 Due: | |
| 6 Trigonometry Review | 2 |
| 7 Law of Sines and Law of Cosines | 2 |
| Assignment 2 Due: | |
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| Unit Test: | 1 |
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| UNIT 9- Personal Finance | 18 |
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| 1 Income | 1 |
| 2 Payroll Deductions- Part 1 CPP, EI, etc. | 1 |
| 3 Payroll Deductions- Part 2 Income Tax | 1 |
| 4 Bank Statements | 1 |
| 5 Investing Money- Simple Interest and Compound Interest | 1 |
| 6 Using TVM (on a Calculator) to Solve Investment Problems | 2 |
| Assignment 1 Due: | |
| 7 Annuities | 2 |
| 8 Loans and Consumer Credit | 2 |
| 9 Mortgages and Property tax | 2 |
| 10 Foreign Exchange | 2 |
| 11 Budgetting | 2 |
| Assignment 2 Due: | |
| | |
| Unit Test | 1 |
| | |
| TOTAL | |

