

Course: 14.01 Mathematics  
Level: 12 (LLD class)  
Credits: 5

Revised  
2008

## **Mathematics IV**

### **Course Outline**

#### **I. Course Description**

Mathematics IV is a required course for the Learning and Language Disabled class. It is designed for secondary special education students who have a basic grasp of mathematical computation but require additional instruction for applying these skills as a wise consumer. Instruction is provided using a variety of realistic, consumer-oriented applications. The goal of Mathematics IV is to provide students with the tools they will need to function as independent, employable, contributing citizens.

High Point Regional High School's curriculum and instruction are aligned to the state's Core Curriculum Content Standards and address the elimination of discrimination by narrowing the achievement gap, by providing equity in the educational programs and be providing opportunities for students to interact positively with others regardless of race, creed, color, national origin, ancestry, age, marital status, affectional or sexual orientation, gender, religion, disability, or socio-economical status.

#### **II. CCCS Addressed**

1. 4.1 Number and Numerical Operations – All students will develop number sense and will perform standard numerical operations and estimations on all types of numbers in a variety of ways.

2. 4.2 Geometry and Measurement – All students will develop spatial sense and the ability to use geometric properties, relationships, and measurement to model, describe and analyze phenomena.

3. 4.5 Mathematical Processes – All students will use mathematical processes of problem solving, communication, connections, reasoning, representations, and technology to solve problems and communicate mathematical ideas.

### **III. Goals and Objectives**

**Goal #1** – To understand and apply the mathematics involved in improving your home.

**Objective** – To compute payments for purchases of items, including comparing and computing regular price, discount rate, and sale price.

**Objective** – To use elapsed time to determine date of payment.

**Objective** – To estimate the quantity of materials and the costs associated with painting a room, papering a wall, covering a floor, building an addition, and insulating an attic.

**Objective** – To calculate the amount and cost of grass seed or fertilizer required for a lawn.

**Objective** – To find the length of fencing required to enclose a yard.

**Goal #2** – To understand and apply the mathematics involved in traveling.

**Objective** – To read maps and compute distance.

**Objective** – To compute travel fares and hotel expenses.

**Objective** – To find the exchange value of U.S. dollars and foreign currency.

**Objective** – To compute the cost of car rentals and parking charges.

**Objective** – To compare time in different time zones.

**Objective** – To calculate flight times between different time zones.

**Goal #3** – To understand and apply the mathematics involved in budgeting your money.

**Objective** – To compute average income.

**Objective** – To compute the percent of income to be spent on each budget item.

**Objective** – To read and create circle graphs as summaries of budget spending.

**Objective** – To complete records to determine if a budget is balanced.

**Goal #4** – To understand and apply the mathematics involved in banking and investing.

**Objective** – To compute and compare earnings from simple and compound interest.

**Objective** – To compute the value of investments over time.

**Objective** – To use and maintain a checking account.

**Objective** – To determine the value of stocks and compute gains and losses.

**Objective** – To evaluate profits and losses from investments.

**Goal #5** – To understand and apply the mathematics involved in paying taxes.

**Objective** – To calculate exemptions, deductions, and taxable income.

**Objective** – To read and use tax tables to estimate taxes.

**Objective** – To compute assessed values and property taxes.

**Objective** – To express property tax rates as percents.

**Objective** – To determine the effective tax rate.

**Goal #6** – To understand and apply the mathematics involved in preparing for careers.

**Objective** – To read a sales tax table and compute the value of purchases that include tax.

**Objective** – To determine correct change.

**Objective** – To apply electrical formulas to calculate watts, amps, ohms, or volts.

**Objective** – To order fractions from smallest to largest.

**Objective** – To practice making precise measurements.

**Objective** – To measure line segments and compute scale length for drawings.

**Objective** – To apply the rule for RPM plus number of teeth to problems about gears.

#### **IV. Technology**

Scientific Calculator

**V. Text:** Consumer Mathematics, Kathleen M. Harmeyer, American Guidance Service, Inc., 2001

#### **VI. Assessment**

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|---------------------------------|------------|
| 1. Homework based on            | 10 points  |
| 2. Participation and class work | 10 points  |
| 3. Quizzes                      | 50 points  |
| 4. Tests                        | 100 points |