# COURSE SYLLABUS

## Course Title: Mathematics
## (8th Grade, Pre-Intermediate)
The Asian International School

**I. INSTRUCTIONAL RESOURCES:**

The following supplies are required for all math classes:

- Math graphing notebook
- Pencils and pens
- Ruler, protractor and compass
- Fx-570 Calculator

**II. COURSE PREREQUISITE:**

Students should complete the 7th Grade Mathematics course and show readiness to take the Mathematics course offered to students by the international program.

**III. GENERAL STANDARDS**

Mathematics as a discipline aims to develop creative thinking, analytical and logical reasoning, and collaboration in order to prepare the students to be equipped and ready to face the challenges of a complex and highly technical society. Hence, the lessons are presented in a sequential manner evolving from simple to complex concepts which involve higher cognition skills. Moreover, it develops better understanding of mathematical concepts and their applications through an interactive approach; thus, performance tasks reflect activities for mastery such as doing investigations or practical works to challenge the inquisitive and well-motivated learners. These activities should provide meaningful and life-long learning experiences that will prepare individuals to be problem solvers.

**IV. COURSE DESCRIPTION**

Pre-intermediate mathematics is a mathematics course that deals with concepts on algebra. Applying the fundamental operations with algebra is the focus of this course. These algebraic concepts will be used in doing computations in geometry in the later part of Pre-Intermediate mathematics.

**V. COURSE GOALS**

Upon successful completion of this course, the student will be able to:

- Understand and work with polynomials.
- Understand and work with algebraic fractions.
- Solve equations and inequalities in one variable.
- Understand and solve problems involving Quadrilaterals and other polygons.
- Understand Thales' Theorem and its applications.
- Understand and work with objects in space.
- Solve English language word problems involving the above concepts.

## VI. COURSE REQUIREMENTS

Students will need to have a careful preparation for each part of every section. Through in-class discussion groups, homework exercise problems, and in-class examination, students will gain necessary knowledge.

This course will also include monthly individual assessment accounting for50% of the overall course grade. The remaining 50% of student grades come from homework, participation, behavior, and attendance. Therefore, it is vital for students to attend class regularly and participate in the lesson.

It is also required that students practice their skills through pair works, group works as well as self study. Examinations will cover the material from the text.

## VII. EVALUATION AND GRADING

Student progress made during the course taking will be assessed through achievement tests as well as other assessments designed, planned, and implemented by classroom teachers. The following grading scale will be operated separately in each semester.

1. Achievement Tests (80%)
    - Mid-term (30%)
    - Final Exam (50%)
2. Other Assessments (20%)
    - Homework: individual/group projects
    - In-class assessments: Quizzes, literary/writing tasks, etc.
    - Class Performance: Attendance and Participation

## VIII. GRADING SCALE

The following grading scale will be used:

| Letter | Range | Percentages |
|---|---|---|
| A | 90-100 | 90% (High Distinction) |
| B | 80-89 | 80% (Distinction) |
| C | 65-79 | 70% (Pass with merit) |
| D | 50- 64 | 60% (Pass) |
| F | 0- 49 | Below 60% (Fail) |

## IX. COURSE SCHEDULE

| SEMESTER | CHAPTER | Unit | CONTENT | TIME (Weeks) | NOTES |
|---|---|---|---|---|---|
| Semester 1 | 1. Polynomials | 1 | Adding and Subtracting Polynomials | 2 | |
| | | 2 | Multiplying of Polynomials | 2 | |
| | | 3 | Factoring Polynomials | 3 | |
| | | 4 | Dividing Polynomials | 2 | |
| | 2. Algebraic Fractions | 1 | Simplifying Algebraic Fractions | 1 | |
| | | 2 | Simplify Complex Algebraic Fraction and Simple Continued Fraction | 3 | |
| Semester 2 | 3. First degree equation and Inequalities | 1 | Introduction to Equations | 1 | |
| | | 2 | Solving Equations | 2 | |
| | | 3 | First Degree Inequalities | 2 | |
| | | 4 | Inequalities and absolute value | 2 | |
| | 4. Similar Triangles | 1 | Thales' Theorem | 2 | |
| | | 2 | Bisectors of Triangles | 2 | |
| | | 3 | Similar Triangles | 2 | |