



## Algebra II & Trigonometry Syllabus

Belen Jesuit Preparatory School

Course Number: 3600

Course Name: Algebra 2 & Trigonometry

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**I. Course Description:** The purpose of this course is to develop the algebraic relationships and deductive strategies that can be used to solve a variety of real-world and mathematical concepts. The course is designed to teach algebra and trigonometry. The course will help the students organize their thoughts in solving mathematical problems that are met in everyday life. The course will also prepare the student to continue studies in mathematics and the sciences. Topics of study include, but are not limited to the following:

- Practice in fundamental operations of arithmetic and properties of real numbers.
- Concepts of equations, inequalities, polynomials, and functions.
- Structure and properties of the complex number systems.
- Relations, functions, and graphs extended to polynomial, exponential, and logarithmic functions.
- Varied solution strategies for linear equations, inequalities, and systems of equations and inequalities.
- Varied solution strategies, including quadratic formula, for quadratic equations.
- Conic sections and their applications.
- Trigonometric Ratios and Functions.
- Graphs of Trigonometric Functions.
- Trigonometric Identities and Equations.

**II. Content:** Semester 1

- Chapter 01 – Equations and Inequalities
- Chapter 02 – Linear Equations and Functions
- Chapter 03 – Linear Systems and Matrices
- Chapter 04 – Quadratic Functions and Factoring
- Chapter 05 – Polynomials and Polynomial Functions

Semester 2

- Chapter 06 – Rational Exponents and Radical Functions
- Chapter 07 – Exponential and Logarithmic Functions
- Chapter 08 – Rational Functions
- Chapter 09 – Quadratic Equations and Conic Sections
- Chapter 13 – Trigonometric Ratios and Functions
- Chapter 14 – Trigonometric Graphs, Identities, and Equations

**III. Methodology:** The learning technique that will be employed includes:

- a) Presentation of the material
- b) Explanation of techniques and methods
- c) Classwork
- d) Review of important areas covered
- e) Daily homework
- f) Question and answer session

**IV. Extra Help:** Students may see the teacher after school so far as the student tells the teacher beforehand in order to schedule time and place.

**V. Assessment: Semester Work:** 75% of the semester grade, divided as follows:

Tests and Projects:	40%
Quizzes:	20%
Homework:	20%
Notebook:	10%
Class Participation:	10%

Semester Exam: Worth 25% of the final grade. It will be given during the week assigned by the administration

Semester Grade: 75% Semester Work + 25% Semester Exam

The Final Grade is the numerical average of both semesters.

Each of these types of assessment is defined as follows:

**Semester Exam:** A comprehensive assessment covering all the topics discussed during the semester. Semester Exams may consist of multiple-choice questions, true/false, short answers, problems, and/or essays.

**Tests:** A summative assessment at the end of each chapter and unit. Tests may consist of multiple-choice questions, true/false, short answers, problems, and/or essays. The tentative dates for chapter tests are in the chapter assignment list.

**Projects:** Individual and/or group assignments to explore or further elaborate on topics covered in class. Projects may include written and oral presentations. Students will be given 2-3 weeks to complete the projects.

**Quizzes:** Short assessments on topics discussed on previous days. Quizzes may be daily at the beginning of class, unannounced, or announced a day before. If a student takes more than 3 quizzes during a week, the lowest quiz grade will be dropped. The quiz grade entered on NetClassroom will be the average of the quizzes taken during the week. **No make-up on quizzes except for exceptional cases of excused school absences of two or more days due to sickness or emergency.**

**Homework:** Homework is an assignment to gain mastery of the topics discussed in class. Homework is due at the beginning of the class period on the day after it is assigned unless otherwise specified. It may be graded everyday or on random days. Homework exercises are listed on the chapter assignment list. **See Homework Guidelines.**

Notebook: A binder containing assignments, syllabus, notes, class work, and homework. Notebooks will be graded on the days Tests are given, or before each progress report. **See Notebook Format and Grading.**

Class

Participation: Before each progress report a grade will be given to each student for involvement in classroom discussions, compliance with classroom rules, and overall behavior.

Any student suspended on a test/quiz day will be subjected to the procedure described in the Student Code Book.

Class rules will follow all rules given in the handbook and by the teacher.

Letter grades will be assigned according to Academic Regulations guidelines.

Make-ups: Students will have up to one week to makeup tests and projects missed because of illness or other excused absences. Work will be made-up only on Mondays after school. All homework will be due at the beginning of the class period. Thus, if a student is tardy to class, the homework will be considered late and not accepted for grading.

**VI. Homework:** Homework will play an important role in gaining proficiency and will be given on a daily basis. A **Chapter Assignments** sheet will be given at the beginning of each chapter showing the dates and problems assigned for each day. Remember that this sheet must be the first page of each chapter section of your notebook. The Chapter Assignments sheet may also be downloaded from my web page at any time.

All homework must be done following the format shown on **Homework Guidelines**.

**VII. Examinations:** There will be at least one test or quiz given weekly.

**VIII. Materials:** Textbook: Larson R., Boswell L., Kanold, T. D., & Stiff, L. (2007). *Algebra 2*. Evanston, Illinois: McDougal Littell (ISBN 978-0-618-59541-9)

Notebook: Three-ring binder full of loose-leaf paper containing syllabus, assignments, notes, class work, and homework. Notebooks will be graded every two weeks or on the days Tests are given. See **Notebook Format and Grading** handout.

Pencils (Work in pen will not be graded)

Eraser

Ruler

Calculator (TI83 or TI 84)

**IX. Requirements:** The time required by the administration for successful completion of this course is five 44-minute periods a week. In addition to the time required in school, at least 30 minutes should be dedicated daily to homework, reviewing, or any other assignment given by the teacher.

## NOTEBOOK FORMAT AND GRADING:

The notebook should be a portfolio of the work done in this class. It should be a binder used for this course only; keep work for other courses in other notebooks.

**Format:** Your notebook must be a 3-ring binder that accepts 8½” x 11” sheets with 1 or 1½” rings. The binder must be clearly labeled on the outside with the following information: your full name, school name, course, period, and school year.

The first pages of the notebook should be a copy of this syllabus.

Use tab dividers (**1 to 14**) to separate each of the chapters in your notebook. The first page of each section should be the **Chapter Assignments**. Class notes, handouts, homework, quizzes, etc., all in chronological order, should follow the Chapter Assignment page. The last page of each chapter should be the **Notebook Evaluation Sheet**.

The notebook should be a useful tool to study; therefore it must follow these rules:

- All work must be done in pencil.
- All work must show your full name.
- All work must be dated.
- All work must show your class and period.
- All work must be titled.
- All work must be kept in chronological order.

Because it should be a useful tool to study, your notebook must follow the following rules:

- All work must be done in pencil.
- All work must show your full name.
- All work must be dated.
- All work must show your period.
- All work must be identified (titled).
- All work must be kept in chronological order.

**IMPORTANT:** Loose pages of work in the binder pockets will not be graded. Notebooks in bad condition will be given a zero. It is your responsibility to keep the notebook in good condition. If your binder is in bad condition, replace it.

<b>Grading:</b>	A 3-ring binder with 1 or 1½” rings is used.	5 points
	Tab dividers are used.	5 points
	Syllabus on first pages of notebook	5 points
	Notes / Classwork / Homework Section:	
	Chapter Assignment sheet is there	10 points
	Class notes are at least 90% there	20 points
	Homework is at least 90% there	20 points
	Section is neat.	10 points
	All items are in chronological order.	10 points
	Notebook is organized, neat, and useful as an instrument of study.	15 points
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	<b>Total:</b>	<b>100 points</b>

## HOMEWORK GUIDELINES:

Homework will consist of daily assignments to gain mastery of the topics discussed in class.

- Format: All homework must be done following this format:
- All work must show your full name.
  - All work must be dated.
  - All work must show your class and period.
  - All work must be identified (titled) showing the lesson (section) and exercises assigned.
  - All work must be done in pencil.
  - All work must be neat.
  - Problems must show steps and related work; only answers are not acceptable on problems that require work or multiple steps.
  - Do not use pages ripped from a spiral notebook. Use lined, graph, or blank 8 ½ x 11 sheets of paper with three holes.
  - Use ruler, compass, etc. for exercises requiring graphs.
  - When graded homework is returned, it must be in the corresponding chapter section, in chronological order, with the rest of the work in your notebook.

Homework not presented in the format described above will be given a grade of 0 (zero).

Due

Date/Time: Homework is due at the beginning of the class period on the day after it is assigned, unless otherwise specified. Late or backdated homework will not be accepted except for exceptional cases of excused school absences of two or more days due to sickness or emergency.

Grading: Homework may be graded everyday or on random days. When graded, it will be given a grade according to the following scale:

- 0 points: Work not done.
- 1 point: Some work done.
- 3 points: More than 50% of the work done.
- 5 points: More than 90% of the work done.

Homework grade will be entered on NetClassroom at the end of the week. It will consist of the average of the graded homework during the week. If more than 3 homework assignments are graded during the week, the lowest grade will be dropped.

## **CLASSROOM RULES:**

To maintain a constructive and productive classroom environment, all students must adhere to the following rules:

**1. Obey all school rules.**

This means that you are responsible for following all school rules and guidelines given to you when you enrolled in the school. Please pay special attention to the rules regarding attendance, tardiness, uniforms, chewing gum, cell phones, and discipline.

**2. Be in your seat and ready to work when the bell rings.**

This means that you must be seated at your desk, with pencils sharpened, classroom material ready, quiet, and ready to begin when the bell rings. Please schedule teacher conferences before or after school. Tardiness will affect your grade and will result in disciplinary actions.

**3. Bring all required materials to class every day.**

This means that you must bring to class every day your textbook, notebook, assignments, pencils, eraser, and other required tools. Make sure you have ready any work or material that is due. Remember that all work must be done in pencil.

**4. Be in the classroom for the duration of the period.**

This means that you are required to stay and participate during the full class period. You are allowed to leave the classroom only for emergencies or if the main school office requests your presence. Please be sure to use the restroom and go to your locker between classes to minimize interruptions.

**5. Be respectful and polite to all people.**

This means that you must listen carefully when the teacher or another student is speaking, raise your hand to ask a question and to participate in class discussions, and behave properly at all times. Please speak only when the teacher acknowledges you. Do not raise your voice, hit, or bother others in the classroom.

**6. Respect other people's property.**

This means you are responsible for keeping the room clean and neat; picking up litter; getting permission before using another person's property; returning borrowed property promptly after you are finished using it; and not writing on desks or defacing any school property.

**7. Do all assigned work in a timely manner.**

This means that all work must be done by the date that it is due. If you know in advance that you will be absent on the date the work is due, it is your responsibility to turn it in before that date. Late or make-up work will only be accepted after documenting a justified absence. A justified absence is defined in the school rules.

**8. Work hard, explore, elaborate, and enjoy the class.**

This means that you are expected to be an active participant in the learning process. Follow instructions; do all assigned work; ask questions when concepts are not clear; look at alternatives; and elaborate on topics beyond what we discuss in class.

Consequences for violation of these rules will be as described in the Student Code of Conduct. This teacher reserves the right to administer classroom detentions, and other forms of logical consequences for violation of these rules.