

# Advanced Studies Algebra II

## Ms. Hillary Griffith

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**COURSE OBJECTIVES:** The course is designed to assist the student in the following:

- To develop logical reasoning skills
- To learn how to read and study mathematics
- To apply calculus concepts to “real-world” situations
- To master skills necessary for problem solving
- To work collaboratively in group situations
- To use technology in discovery and problem solving

**CONTENT:** Advanced Studies Algebra II emphasizes facility with quadratic forms, powers, and roots, and the functions based on these concepts. Students study logarithmic, polynomial, and other special functions as tools for modeling real-world situations. In addition to the traditional advanced algebra topics, Advanced Studies Algebra II begins the study of introductory stats and probability.

**EXPECTATIONS:** I prefer to manage a classroom like I coach a team ... so you can think of yourselves as MATHLETES. Of course, with any sport there are certain rules and expectations which players and coaches must abide.

- HAVE RESPECT – treat all with respect (students, teachers, facilities, substitutes, visitors, properties)
- BE FAIR – teachers and students must be fair and consistent in upholding these rules and others we know are expected.
- BE RESPONSIBLE – we must all be responsible for our own actions and for complying with the expectations of the class (including being on time to class, turning in assignments promptly and getting make-up work when you are absent)
- BE ORGANIZED – teachers and students must be prepared for each day of work and organized in their lessons, objectives, and presentations (It’s hard to be good when you’re sloppy or unprepared.).
- TAKE PRIDE – teachers and students must take pride in themselves and their work. DO YOUR BEST to make this a great experience. Don’t be in the position to say “I wish I would have...”

You should take note that using unapproved technology, websites, classmates (screenshots, text messages, pictures, phone calls, etc), tutors, etc to complete graded items on homework, quizzes and tests is not academically honest. This will be addressed as cheating/plagiarism and disciplined in the same manner as in-class violations.

**CELL PHONES:** Cell phones should be TURNED OFF and not in use.

**CHROMEBOOKS:** Chromebooks should only be used for educational purposes at appropriate times.

ACADEMIC HONESTY / HONOR CODE: From the student handbook: “We are accountable for all that we say and write. We are responsible for the academic integrity of our work. We pledge that we will not misrepresent our work by using the work of others and presenting it as our own. We also pledge that we will not give or receive unauthorized aid.” Disciplinary action will occur for instances of plagiarism, cheating, and forgery/falsifying documents. Consequences are CUMULATIVE during your high school career and can affect membership in activities.

MATERIALS:

Textbook: We will use Holt McDougal Larson Algebra 2.

Supplies: You will need a spiral notebook or folder and three-ring binder, ruler, and graph paper.

Calculator: Students are required to have a scientific calculator for this class. However, it is strongly recommended that students purchase a graphing calculator as several of the topics we study will be approached through the use of this technology. The TI-83+/TI-84 will serve our purpose well. I have a classroom set of TI-84 calculators that may be used during the class period only. Next year, in IB Math I, graphing calculators will be used extensively so a purchase now will help you become familiar with using one. The HP's and the TI-89 or TI-92 with infrared capabilities or Qwerty keyboards are **not** allowed on external exams or my exams. **MARK YOUR CALCULATOR BOLDLY FOR IDENTIFICATION. UPON PURCHASING A GRAPHING CALCULATOR, RECORD YOUR CALCULATOR'S NUMBER WITH ME FOR FURTHER IDENTIFICATION.**

GRADING: (Note: 10% of your overall grade will be your final exam.)

**WEIGHTED: 80% Tests/Quizzes, 10% Projects/Notebook, 10% Homework**

TESTS: Tests will be worth approximately 100 points each. Be prepared for parts of any exam that will NOT allow the use of a calculator. These non-calculator portions will be announced during the chapter review. **NO RETESTS WILL BE GIVEN.**

TAKE-HOME TESTS: These will consist of actual problems from IB Exams from previous years. Points will vary. It is important to become acquainted with IB problem types as you are preparing to take the IB exam in IB Math 2. These will be graded on the accuracy of your answers and the appropriate presentation of your solutions. Keep in mind that the IB program takes communication and process very seriously in its evaluation. Show your work clearly.

QUIZZES: Quizzes will be worth approximately 20 points each. Typically, you will have 1 – 2 quizzes per chapter. These are included on your assignment sheets.

PROJECTS: You may be assigned individual or group projects. These projects might include writing, research, problem solving, or the use of technology (calculators, computers, internet). Points will vary.

HOMEWORK – Used for practice to perfect your skills. Also included here are “Connection Sheets”, worksheets, evaluations, and activities. These Connection sheets will be collected on the day of the chapter test and will be worth 20 points. These are a great way to prepare for the upcoming test.

NOTEBOOK- Students will be required to keep a binder of important documents to be turned in second semester. More details will be given regarding this requirement later.

- MAKE-UP HOMEWORK DUE TO ABSENCES – All assignments are listed on an assignment sheet at the beginning of each chapter. When absent, you will have a good idea

about what material you missed. Staying caught up is the best thing that you can do for yourself. If it is a planned absence, ask about our plans for those days **before you leave**. If you miss a block class do not wait until the next class to get your make-up work- stop by the next day!!

- MAKE-UP TESTS/QUIZZES DUE TO ABSENCES – All missed quizzes and tests will be made up outside of class ... before or after school or at another prearranged time. They should be made up promptly. All testing before or after school will be done in a designated math classroom. A testing room schedule will be posted each month that will describe which room will be available during which times. This schedule will be posted in my room and will also be located on the math office door (1124). **YOU MUST BRING YOUR STUDENT ID WITH YOU TO THE TESTING ROOM BEFORE YOU WILL BE ISSUED A TEST.** School policy is that you have one day for every day that you are absent to make-up your test. If this is a problem, you must discuss your situation with me personally. This make-up procedure is designed to help accommodate the many different schedules that we all have. **GET TO THE TESTING ROOM EARLY ENOUGH TO LEAVE PLENTY OF TIME TO TAKE YOUR TEST/QUIZ. IF YOU RUN OUT OF TIME, YOU WILL NOT BE GIVEN ADDITIONAL TIME TO FINISH IT LATER.**
- DUE DATES -Everything is due on or before the due date at the beginning of your hour. No exceptions. If you have class 4<sup>th</sup> hour and turn it in 5<sup>th</sup> hour, it is late. This includes projects, take-home tests, grade checks, homework, etc....**EVERYTHING!**
- LATE WORK – Assignments will be accepted late with a 10% reduction per day. “Late” is defined as any time after they are called for to be turned in. For example, if you turn in a project at the end of the hour that is due at the beginning of the hour, it is late and you will lose 10%. **PROJECTS ARE DUE ON THE DUE DATE EVEN IF YOU ARE ABSENT. YOU NEED TO MAKE ARRANGEMENTS FOR YOUR PROJECT TO BE AT SCHOOL SO THAT IT IS TURNED IN ON THE DUE DATE UNLESS YOU HAVE CONTACTED/SPOKEN WITH ME PERSONALLY BEFORE THE PROJECT IS DUE.**
- FINAL EXAM – The final will be cumulative for the current semester.
- EXTRA CREDIT – These may include special test questions, participation in MO Math League Contests, or otherwise announce opportunities. All extra credit will be assigned to the entire class. **EXTRA CREDIT IS OFFERED SPARINGLY SO TAKE ADVANTAGE OF IT WHEN IT OCCURS.**
- END OF COURSE EXAM- Second semester you will be taking the Algebra 2 EOC Exam. This will be worth 10% of your semester grade.

#### STEPS FOR SUCCESS:

- MINIMIZE ABSENCES. In many cases the material demands a verbal explanation that can only be truly delivered adequately with a classroom discussion. Your regular attendance is important for success in this course.
- BE CONSISTENT IN COMPLETING HOMEWORK ... DAILY. Those students who lag behind on their DAILY homework responsibilities struggle SIGNIFICANTLY in mastering the subject matter.
- MANAGE YOUR TIME WISELY. Managing your in-class and out-of-class time wisely can enable you to be better prepared and less stressed.
- ORGANIZATION. Being neat and organized in your work will help you in problem solving and minimize mistakes. You will not be successful on work that has little organization.

WHAT TO DO WHEN YOU NEED EXTRA HELP: If you find that you are having difficulty with a topic or a group of topics, I encourage you to seek additional help. There are a number of ways to do this:

- ASK QUESTIONS IN CLASS. Time will be given in class to work and ask questions. You can have your questions addressed either individually or during group discussion. You would be surprised how often someone else has exactly the same question you do.
- SEEK MY HELP OUTSIDE OF CLASS. I am available in room 1986 in the mornings beginning at 7:10 am and after school until 3:00 pm.
- MATH TUTORING  
Before and After School Tutoring. Tutoring sessions will also be available to assist you at specified times before and after school. Math teachers will conduct these sessions for students in any math course. Teachers and room numbers will be posted in my room.

We are in this together. Ask questions of me and I'll ask questions of you. Let's work as a team. Interact, learn from each other, have some fun. Students learn from teachers AND teachers learn from students. I don't want you to ever be afraid of asking questions or of making mistakes – you won't know how much you know until you know how much you don't know. We ALL approach problems we can't solve immediately.