Advance Topics in Mathematics is a course designed for students who are following the

Algebra-Geometry-Algebra II sequence and have successfully completed a year in each of those

courses. Furthermore, this course is designed for students who are capable of a more advanced

course at a normal pace. Students are expected to study and complete all homework assigned for

this course. Emphasis will be on practical applications and modeling throughout the course of

study. Oral and written communication concerning the language of algebra, logic of procedures,

and interpretation of results will also be required during the course.

The workload for this course will require that you invest significant amounts of time and effort

outside the classroom. A good, positive attitude and the motivation to excel and succeed are

essential characteristics that you must possess. To excel at or above the average level of

expectation in this course, you must demonstrate the ability to work independently and to do

more than just the assigned work.

Attending class on a daily basis is essential. You cannot develop the continuity of learning so

crucial in Advance Topics if your absence from class is persistent.

Your attention, cooperation and participation in class are vital to the efficiency and effectiveness

of this course. The class will only be as good as you choose to make it. The responsibility for

your success in Advance Topics lies with you.

**Major Concepts/Contents**. The purpose of this course is to enable students to extend

knowledge of functions, acquire additional modes of mathematical reasoning at an introductory

level, and develop skills necessary for the further study of mathematics.

**The content should include, but not be limited to, the following:**

 Fundamental concepts of logic, including Venn diagrams

 Structure and properties of the real and complex number systems

 Explorations of geometric relationships involving circles

 Relations, functions, and graphs extended to polynomial, exponential, and logarithmic

function

 Data analysis concepts and techniques, including introductory statistics and probability

 Arithmetic and geometric sequences and series

 Operations with matrices

 Introduction to trigonometric functions and their applications, including both right and

oblique triangles

 Conic sections and their applications

**CALCULATOR**

Each student is required to have a graphing calculator in his/her possession every period that this

course meets. Texas Instrument TI83 or TI84 models are recommended and will be used by the

instructor in class. The TI81 and TI85 models are obsolete. The TI86 model has a very

different formatting scheme and will make it difficult for the student to follow any classroom

instruction. Use of any other brand of graphing calculator will make it extremely difficult for the

student to coordinate efforts with the work of the instructor and accept the responsibility of

learning how to operate it. Use of the Texas Instruments TI89 and TI92 models will not be

permitted since these models perform symbolic manipulations and are by definition minicomputers

and not calculators. A graphing calculator is not only necessary in class, but essential

for use on homework assignments, quizzes, and tests, unless otherwise indicated by the exercises

or the instructor. In exchange for a student’s school ID card, TI82/3 calculators will be

available for use in class. **Students will not be permitted to take these calculators from the**

**classroom.** If graphing calculator is taken from the classroom, a referral will be written and

turned in.

**LECTURE NOTES**

You are responsible for taking thorough and copious lecture notes in class. These notes are to be

kept in a **SPIRAL BOUND NOTEBOOK** reserved exclusively for trigonometry lecture notes.

**FAILURE TO KEEP COMPLETE, UPDATED LECTURE NOTES WILL RESULT IN A**

**REDUCTION OF YOUR GRADE.**

**ASSIGNMENTS**

Work for assignments is to be kept in a separate **SPIRAL BOUND NOTEBOOK IN PENCIL**.

This notebook is to be used exclusively for trigonometry homework assignments. Lecture notes

are not to be kept in this assignment notebook. Failure to keep complete, updated solutions to

assigned problems will result in a reduction of your grade.

All supporting work in the solution of a problem must be shown. Answers only are not

acceptable or sufficient. Written work must be legible, precise and neatly organized. Even

though a final result for each assigned problem may not be obtained, a concerted effort to

complete each problem must be in evidence.

Assigned problems for this course appear at the end of the syllabus. Approximately one lesson

from the assignment guide will be covered for every two days of class. Assignments must be

completed prior to the next class meeting unless otherwise indicated by the instructor. **IT IS**

**YOUR RESPONSIBILITY TO COMPLETE ANY ASSIGNMENT(S) MADE DURING**

**AN ABSENCE FROM SCHOOL. IF YOU ARE NOT SURE WHAT ASSIGNMENT(S)**

**TO COMPLETE, YOUR PARENTS SHOULD CONTACT THE GUIDANCE OFFICE**

**AND MAKE ARRANGEMENTS FOR YOUR ASSIGNMENTS TO BE OBTAINED**

**FROM THE INSTRUCTOR.**

You may be asked to place solutions for selected assigned problems on the blackboard to

demonstrate the completion and thoroughness of your work. You may also be asked to respond

to questions designed to probe your understanding of a problem and its solution. You must

continually exhibit a knowledge and understanding of current material as well as previously

learned skills and concepts. **Repeated failure to respond to questions or no participation in**

**class will result in notification to your parents that you are not meeting the requirements of**

**this course.** If your reluctance to participate in class persists, it will be reflected in your overall

grade in the course.

**QUIZZES**

At the discretion of the instructor a quiz will be administered following the completion of

specific lessons from the assignment guide. When specific quizzes will occur is indicated in the

**Assignment Guide**. However, you are expected to always be prepared since additional or

supplemental quizzes may sometimes be unannounced. It is imperative that you keep all written

assignments up-to-date so that you are not caught unprepared.

All quizzes must be completed in **PENCIL**. Work done in any other form will not be graded.

Also, all work must be done on the quiz paper. No scratch paper will be allowed.

Each quiz will be worth ten (10) points. Quizzes missed because of absence from class will not

be made up, but will not count against your grade.

**TESTS**

A test will be administered following the completion of a given unit of material. Tests are

always announced well in advance of their administration to provide ample opportunity for

review and preparation. Unit tests are extremely important and should not be taken lightly.

Since there will only be a limited number of tests during the semester, success on each and every

test is crucial. Tests should be approached with the utmost seriousness. You should make every

effort to invest the time and energy necessary for successful performance on a test.

All tests must be completed in **PENCIL**. Work done in any other from will not be graded. Also,

all work must be completed on the test paper. **No scratch paper will be allowed.**

**Any test missed because of an excused absence must be made up immediately**. On your first

day back after the absence, report to the instructor before school to make arrangements for a time

when the test can be completed. You will be given a different, but comparable form of the test.

If you know before hand that you must be absent on the day of the test, it is your responsibility to

inform the instructor and make arrangements, if at all possible, to complete the test prior to your

absence. It is always to your advantage as a student to be present the day of the test. The

environment for a make-up test is never as good for testing purposes as the classroom

environment on test day.

**SEMESTER EXAMINATION**

At the conclusion of the semester each student will be administered a comprehensive final

examination. The exam will be based upon the skills and concepts covered during the semester

and will comprise one-seventh of your final grade.

***CLASSROOM EXPECTATIONS, PROCEDURES, AND OPERATIONAL GUIDELINES***

The primary goal in all classes is the learning of mathematics. Attainment of this goal is

contingent upon your desire and your ability to cooperate and follow the guidelines and

procedural herein.

All classes will be conducted on the basis of **RESPECT**. The instructor will treat each student

as an individual learner and respect his/her ideas, opinions, and feelings. Students will be treated

as adults as long as their behavior warrants such treatment. **Do not bring an attitude into this**

**classroom…Leave it in the hallway!** There is absolutely no place in any class for any form of

disrespect.

1. **Once you enter the classroom, you are here to stay**. If you want to leave, you must obtain

the instructor permission. If you leave without the instructor permission, you will receive a

referral.

2. **When the bell rings to begin class, you are expected to be in your assigned seat,**

**prepared to work.** If you are not in your assigned seat, you will receive a tardy.

3. **Attending class regularly is essential.** Learning and reinforcement of learning cannot

adequately take place unless students are in class everyday. Although absence from class is

sometimes necessary, the number should be kept to the absolute minimum. Excessive absence

from class will surely be detrimental to your level of success in this class over the long term.

4. It is your responsibility to **come to class prepared to work** with textbook, notebook, pencils,

graphing calculator, and other necessary materials in your possession.

5. **Remain in your seat** after the start of class unless you receive permission from the instructor

to move about the classroom. No student should be wandering around the class at any time. Do

not get up to sharpen your pencil (you should have a spare), throw things away, hand a paper to

someone, etc. If you have trash, hold it until the end of class. If for some reason you must get

up, raise your hand and ask.

6. Absolutely no food is permitted in the classroom at any time. Gum chewing is not allowed.

Students are not permitted to have any type of bottle, can or other container in the classroom

with any beverage. **Students are permitted to bring water in the classroom as long as the**

**top can be closed to prevent spillage.**

7. The **telephone** in this classroom is strictly **off limits** to all students—absolutely **no**

**exceptions**! Anyone caught using this telephone will be sent to the office with a referral.

8. The **wearing of sunglasses** of any kind **will not be permitted** in the classroom. Upon

entering the classroom, please remove sunglasses until you exit the room at the end of class.

9. Learning requires **Work**. A high level of effort will be expected of every student. If you are

not here to work, then you are in the wrong place and should consider enrolling in a different

course. You cannot be successful in this course unless you are willing to expand maximum

effort.

10. The **undivided attention** of every student is required in this class at all times each day. Off

task behavior such as talking, day-dreaming, leaving your seat, or doing other work will not be

tolerated.

11. **When the instructor talks, everyone listens!** There will be absolutely no other talking. If

a student has something to say, they will raise their hand and be recognized by me. Other

students in the class will then respect that student’s right to speak and be heard.

12. **Class participation** is required of every student. Taking part in class discussions and asking

questions are necessary requisites of this course.

13. **Homework assignments** are a necessary part of the learning process. Students will come to

class prepared to demonstrate that they have attempted to complete all assigned homework

problems.

14. Students **must take notes** in class. The mathematical content of this course is such that all

students will need to take thorough notes, attending to both broad generalities as well as more

specific details.

15. The student response “**I don’t know**” to any teacher question addressing course content is

**unacceptable**. Students are expected to make every effort to respond to teacher initiatedquestions

in a positive way.

16. **Combing or Brushing of hair** in the classroom will **not be permitted** at any time. Also,

**putting on makeup will not be permitted**.

17. **The bell signaling the end of the period does not dismiss the class.** Students will remain

in their seats and continue to listen, take notes, and work until the **instructor dismisses the**

**class.**

18. **No Electronic Devices:** No electronic devices are permitted out in class. (This includes

games, ipods, iphones, mp3 players, etc.) Cell phones use during school hours is not permitted.

Cell phones will be collected if they go off during class.

**Citizenship grade policy**

“1” Makes positive contributions to the learning environment of the class or group.

Always has materials.

No unexcused tardies per quarter.

Always follows FWBHS Honor Code.

“2” Often makes negative contributions to the learning environment of the class or group.

Often does not have materials.

One or Two Unexcused tardies per quarter.

Does not follow the FWBHS Honor Code.

“3” Frequently makes negative contributions to the learning environment of the class or

group.

Frequently does not have materials.

Three or more unexcused tardies per quarter.

Does not follow the FWBHS Honor Code.

**Discipline**

**Minor Disruptions:**

1st Teacher Conference with student/Verbal Warning

2nd Verbal Warning/Parent Called

3rd Assigns Detention/Send to Buddy Teacher/Parent Called

4th Referral/Sent to the office

**Letter Grade Policy**

**90.0-100% A**

**80.0-89.9% B**

**70.0-79.9% C**

**60.0-69.9% D**

**TESTS 40%**

**HOMEWORK 20%**

**QUIZZES 10%**

**LECTURE NOTES 10%**

**PROJECTS/COMPUTER ASSIGNMENTS 20%**

**Example: How to calculate your grade.**

**Test Avg 80 .40 X 80 = 32**

**Homework Avg 100 .20 X 100 = 20**

**Quizzes Avg 70 .10 X 70 = 7**

**Lecture Notes Avg 100 .10 X 100 = 10**

**Project Avg 100 .20 X 100 = 20**

**Grade 89**

Grades are weighted in this class. In this class, graded activities will include tests, quizzes,

computer assignments, projects, lecture notes, and homework. Homework is used to reinforce

important concepts from class. A list of homework assignments for each chapter can be found

on the web at http://artmathonline.com/afmorrison.html. Homework is due the next day after the

lecture on that section is complete. Homework will be place in the appropriate container for that

period at the beginning of class if told that the instructor will collect it. Test dates are posted on

the web at my site and in the classroom. All dates are subject to change depending on school

activities and speed of the class. Site will be updated when needed.

**Materials to be brought to class each day**

Pencils, eraser, notebook paper.

Three ring notebook in which you will keep all work and handouts (includes Spiral

Bound Notebooks)

Graphing Calculator

Textbook

**RULES CONCERNING LATEWORK**

Absences due to sporting events, field trips, college visitations, etc., the work, tests, quizzes are

due when the student returns to school. The definition of “day” above for this class will mean a

calendar school day using only Mondays-Fridays (not including school holidays). **WORK**

**TURNED IN LATE FOR REASONS OTHER THAN ILLNESSWILL BE ACCEPTED**

**ONLY AT THE DISCRETION OF THE INSTRUCTOR, ANDWILL RECEIVE LESS**

**CREDIT THAN WORK TURNED IN ON TIME.**

**The instructor is available for extra help (when and how arranged): Office hours are on**

**Tuesday and Thursday from 1:50 to 2:15.**

**Test Retakes**

Any student who makes below 70% on any test will be given the opportunity to retake a test that

will be similar to the first test. Maximum grade on the retake is 70%. A letter will be sent home

to notify the parent of the student’s failure of the first test. The letter will ask permission for the

student to retake a different test. Also, this will explain to the parent that if the student makes a

lower grade on the retake, that grade will be used. Parent must sign the letter and return it

before a retake can be accomplished. Student must attend **two hours of remediation or**

**tutoring** before retake. This must all occur within five school days.

**Passes**

**A student will not be released from class except for reasons of emergency or when a student**

**is requested to report to a school official. An emergency is defined as a necessary restroom**

**visit. Student will be given 5 minutes for this visit. No passes will be permitted the first**

**or last five minutes of class. No passes will be issued in the hall between periods. No**

**passes will be issued for the parking lot.**

**Tardy Policy**

**The policy of the school will be followed. You will be considered tardy if you are not in**

**your seat by the bell.**

**Computers**

**In class computers will not be used unless permission is given.**

**CHEATING**

**Zero tolerance for cheating. The following behaviors are considered cheating:**

 **Copying another student’s homework.**

 **Copying another student’s test or quiz answers.**

 **Allowing another student to copy your homework, test, or quiz.**

 **Taking a test and telling other students the answers.**

 **Using a cell phone to text message questions and/or answers.**

 **Photocopying any part of a test.**

 **Copying work from the internet or other students and turning it in as your work.**

 **Copying any part of someone else’s work without proper documentation.**

**Any students caught cheating will be given a zero and parents called for the first offense. If**

**a second offense occurs, the student will be referred to the office and assigned Saturday**

**detention. A third offense would warrant suspension from school for up to three days. I**

**will not call out a student for cheating during the tests or quiz. I will allow them to finish**

**ensuring that there are not any confrontations that will interfere with other students**

**testing. Student will be notified after class that he/she was caught cheating.**

**Please fill out, sign this page and have your child return this page**

**only to class.**

**Student’s Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Student’s ID Number\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Class Title\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period in class\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Parents’ Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Home Phone\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Work Phone\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Cell Phone\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Parents’ email\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Parents’ Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Home Phone\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Work Phone\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Cell Phone\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Parents’ email\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**I have read and understand the class syllabus, class rules, and class policies.**

**Parent’s Signature\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_**

**Parent’s Signature\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_**

**Student’s Signature\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_**