

Student Guide and Grading Policies - Mr. Ebbert

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How to contact Mr. Ebbert:

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Policies that apply to ALL of my classes:

Tutoring:

I tutor every morning before school from 6:50 to 7:10. Additionally, my computer lab is also available during that time for academic use and studying. After school tutoring or earlier morning tutoring opportunities may be available by appointment. I am usually in my room much earlier. If my room is open you are welcome to use my room for studying or working on any academic endeavors. Please sign-in when studying or being tutored in my room.

Note-cards:

Students are encouraged to make note-card review questions and use them to review and practice for quizzes and tests. These should be created during class as well as outside of class. I suggest that you should keep all of your note-cards, even after the course ends. Many of my former students have found these to be very helpful in college! While some of these could be "flash card" in style, most of them should require higher-order thinking. For example, you could make note-card questions with problems to solve, then have an outline of the solution steps on the back, including a final answer.

Assignments:

All daily assignments are due at the end of the class period, or on the next school day after they are assigned if the assignment includes homework. Daily assignments are not always graded, and when they are graded a variety of methods are used for grading. I do not tell you ahead of time if a daily assignment will be graded or not, so assume that it will be. Some assignments are "Long-Term Assignments" (LTAs) to allow for more flexible completion. These assignments should be completed over a period of time instead of trying to do the whole thing the day before it is due. **All assignments MUST only contain your own work, unless otherwise specified in writing on that assignment.** Long-Term Assignments (LTAs) will be collected and graded as a formative assessment. Again, a variety of grading methods will be used. All assignments are expected to be completed on-time. LTAs **will** be graded. Daily assignments **may** be graded. I use random-interval reinforcement for daily assignments, so I do not announce ahead of time if I am going to grade them. Just assume they WILL be graded. Assignments often have questions that are similar to those appearing on quizzes or tests. Also, assignments are meant to be learning opportunities. So even when they are not graded they have value and are an important part of the learning process.

Bring to class every day:

Bring your notebook, assignments, note-cards, paper, and pencil with you every day. You may use a pen sometimes, but other times a pencil will be needed so it is best to bring both. Every day you are expected to have paper for an assignment AND your notes out and open BEFORE class starts. It is also a good idea to have some blank note-cards ready too. **Always bring a pencil.**

Quizzes and Tests:

Expect all quizzes and tests to be cumulative. Our goal is long-term learning, therefore I "spiral" (sometimes called scaffolding) my quizzes and tests to include previous topics. This prevents students from learning something for a test and then forgetting about it. Math, Computer Science, and Physics are all cumulative subjects in which prior learning is required for further study, so testing this way is an obvious choice.

Always be ready for a short, unannounced quiz. Quizzes provide feedback, and allow you to monitor your progress. Knowing your strengths and weaknesses helps you to improve. The quizzes also make excellent study guides for tests. Only the quizzes you were present for will be averaged so you do not need to make-up missed quizzes. Quizzes count in the formative category.

Tests are announced ahead of time. Check the board and Gradebook software for upcoming tests. We will have three "summatives" each nine-week grading period, except possibly the 4th nine weeks. Summatives will usually be tests, but in some classes may also include Internal Assessments or major lab activities. Some tests may have

questions that require the use of a graphing calculator, in which case you can use your own or borrow one from me. You may not share calculators during quizzes or tests. Many tests and quizzes are “no calculator” which means no calculating device of any kinds may be used during those quizzes and tests, including, but not limited to graphing calculators, computers, “smart” watches, or any device with external communication capability (Bluetooth, wi-fi, cellular, etc).

Semester Grades:

If you have an “F” for either one of the nine-weeks grades and a “C” or higher for the other nine-weeks grade during a semester, then your semester grade will be based on the **numeric average** of the two nine-weeks percent grades and the default grade will be overridden if needed. For example, a grade of 71% (C) and 49% (F) averages to a 59% (F). So your semester grade would be an “F”. If you have no “F” grades during a semester or an “F” and a “D” then the County default averaging is used.

Grading:

Assignments:

Late work will not be accepted (except as noted by County and school policy for absences, which provides one day for each consecutive day of absence to submit work). All work must be the student’s own work. While getting help is encouraged, this is not the same thing as having someone else do the work for you. Copying someone else’s assignment or having someone tell you exactly what to do each step of the problem is NOT the same as getting help. Likewise, finding solutions on-line and copying those solutions is not acceptable. Assignments may be graded based on correct work and correct answers, or using some other rubric or combination of rubrics. The exact grading method is NOT announced ahead of time, thereby using random interval reinforcement. Assignments will count in the formative grading category unless otherwise noted.

Quizzes:

Quizzes count in the formative category unless otherwise noted. Students do not need to make-up missed quizzes as I only average the ones they are present for.

Tests:

Tests count in the summative category. If a student misses a test, he or she must make it up as soon as possible, either before or after school (preferably before school). Normally students have one day for each day they are absent to make-up missed work and tests. Please discuss making up tests with me as soon as you return from an absence so we can make sure you complete it within the required window. **Failure to make-up a test in a timely manner will result in a zero on that test.**

My “retest” policy:

I provide one announced “retest quiz” per nine-weeks. This counts as a regular quiz in the formative category. Additionally this quiz *could* replace your lowest test grade if you earn a grade higher than your lowest test grade. The replacement of your lowest test grade is NOT automatic. You must EARN this privilege by doing all the right things both in and out of class.

- Consistently doing all the right things in and out of class includes, but is not limited to:
 - Being ready for class before the bell rings with notes out and open and other materials ready to go.
 - Fully using class time for learning and working on the subject matter.
 - Completing all assignments and attempting to do so correctly
 - Taking notes.
 - Reviewing.
 - Asking questions in class as needed.
 - Attending tutoring as needed.

The “retest quiz” may occur prior to the last test during some of the nine-week grading periods. When that happens, your lowest test grade will not be replaced until after all tests are completed since the last test could be your lowest test grade.

Academic honesty:

Academic honesty is non-negotiable. Without honest academic work, grades do not reflect the actual skills, knowledge, and understanding of the student. Any form of cheating will NOT be tolerated. This includes but is not limited to: plagiarism, obtaining quiz or test answers from other students or sources other than your own mind, copying assignments, using unauthorized devices (calculators, cell-phones, telnet, etc.) during quizzes or tests, using “crib sheets” during quizzes or tests, notes written on body parts, shoes, clothes, etc., or any other attempts

to be academically dishonest. Any of these forms of cheating will result in a zero on the assignment, quiz, or test, and may result in additional disciplinary action, including possible program eligibility consequences.

Remember that ultimately, when you cheat you are really just cheating yourself out of learning... and learning is what we are supposed to be here for.

Additional Policies applying to my AP courses only:

All students in an AP course are expected to take the AP exam for that course. Please refer to our school policy:

"In order for students to receive weighted (1.0) credit for an Advanced Placement course, they are expected to take the AP examination in May. If a student misses an Advanced Placement examination, the name of the class will be changed to an Honors class (i.e. English Language AP to English III Honors) and the class weighting will be changed to a 4.5 instead of a 5.0 for an "A". NOTE: The word "honors" does not always appear in 4.5 weighted classes. For example, Calculus (non-AP) is just called Calculus."

Additionally, if you do not take the AP exam, you will have an obligation for the cost of the test.

Additional Policies applying to my IB courses only:

IB students are held to an even higher standard. Please refer to the IB materials you have received from the IB coordinator. Academic dishonesty may result in dismissal from the IB program. Non completion of Internal Assessments will result in dismissal from the IB program as Internal Assessments are an essential part of the program.

Expected Levels of Understanding (Bloom's Taxonomy):

Understanding of the subject matter and the process of approaching, organizing, and solving problems requires more than just a rote memorization of facts. True understanding requires many levels of thought. I will be looking for the following levels of understanding, based on Bloom's Taxonomy, in all forms of evaluation in all of my classes:

Knowledge:

Although some alteration of the material may be required, the primary task is remembering information.

Comprehension:

This is the lowest level of understanding. This is the ability to make use of material or an idea without necessarily relating it to other material or seeing its fullest implications.

Application:

This involves correctly choosing an appropriate method of solving a problem when no mode of solution is specified.

Analysis:

Breaking information into its constituent elements so the relative hierarchy of ideas is made clear and the relations between the ideas are made explicit.

Synthesis:

The putting together of elements to form a whole. Creating a pattern or structure that was not clearly there before. Using ideas you have learned in a new way or in a new combination of ways.

Evaluation:

Making judgments. Quantitative and qualitative judgments about the extent to which material and methods satisfy criteria. Deciding which method will produce the best results. Use of a standard of appraisal. The criteria may be determined by the student or may be provided.

Learning is not just about “jumping through hoops” or being able to mimic the procedures demonstrated by the teacher. True learning requires developing an understanding of the topics and being able to process this understanding and adapt to new situations.

Common Core Standards for Mathematical Practice:

- 1. Make sense of problems and persevere in solving them. (MACC.K12.MP.1)**
Solving a mathematical problem involves making sense of what is known and applying a thoughtful and logical process which sometimes requires perseverance, flexibility, and a bit of ingenuity.
- 2. Reason abstractly and quantitatively. (MACC.K12.MP.2)**
The concrete and the abstract can complement each other in the development of mathematical understanding: representing a concrete situation with symbols can make the solution process more efficient, while reverting to a concrete context can help make sense of abstract symbols.
- 3. Construct viable arguments and critique the reasoning of others. (MACC.K12.MP.3)**
A well-crafted argument/critique requires a thoughtful and logical progression of mathematically sound statements and supporting evidence.
- 4. Model with mathematics. (MACC.K12.MP.4)**
Many everyday problems can be solved by modeling the situation with mathematics.
- 5. Use appropriate tools strategically. (MACC.K12.MP.5)**
Strategic choice and use of tools can increase reliability and precision of results, enhance arguments, and deepen mathematical understanding.
- 6. Attend to precision. (MACC.K12.MP.6)**
Attending to precise detail increases reliability of mathematical results and minimizes miscommunication of mathematical explanations.
- 7. Look for and make use of structure. (MACC.K12.MP.7)**
Recognizing a structure or pattern can be the key to solving a problem or making sense of a mathematical idea.
- 8. Look for and express regularity in repeated reasoning. (MACC.K12.MP.8)**
Recognizing repetition or regularity in the course of solving a problem (or series of similar problems) can lead to results more quickly and efficiently.

Bloom’s Taxonomy and the Common Core Process Practices both speak to the idea of UNDERSTANDING Mathematics (or Computer Science, or Physics)... not just being able to mimic procedures or solve a bunch of problems that are all nearly identical. We are trying to create students who can understand and apply what they learn. That can only be accomplished by practicing the process of applying knowledge in new situations.

Syllabi:

These topics will incorporate the Bloom's Taxonomy levels of understanding and Common Core Process Standards as well as other "best practices". Throughout the course, SAT, ACT, AP, and IB review will be interwoven into the curriculum wherever possible.

AP Calculus (AB):

A paper copy of a complete topic listing with amplifications can be provided upon request. This information is also available online on the College Board website.

Topics:

- Functions, graphs, and limits
 - Analysis of functions and graphs
 - Limits
 - Asymptotic and unbounded behavior
 - Continuity
- Derivatives
 - Conceptual understanding
 - Slope at a point on a curve
 - The derivative function
 - The second derivative and concavity
 - Applications of derivatives
 - Techniques for computing derivatives
 - Derivatives of basic function types
 - Rules for derivatives of sums, products, quotients, and composite functions
 - Implicit differentiation and the chain rule
- Integrals
 - Definite integrals and Riemann sums
 - Integrals as accumulators of rates of change over an interval
 - Geometric properties of integrals
 - Applications of integration
 - The fundamental theorems of calculus
 - Techniques of antidifferentiation
 - Applications of antidifferentiation
 - Solving separable differential equations and applying them to modeling
 - Numerical approximations

IB Mathematics SL combined with BC Calculus

A paper copy of a complete topic listing with amplifications can be provided upon request. This information is also available online on the College Board and International Baccalaureate websites.

This is only an outline of major topics:

- Algebra
- Functions and equations
- Circular functions and trigonometry
- Matrices
- Vectors
- Statistics and probability
- Calculus

Students will submit a mathematical Internal Assessment according to the requirements of IB. These will count towards the class grade AND be externally moderated and counted towards the overall IB grade.

See the topic list for BC Calculus for additional topics.

Analytic Geometry/Trigonometry (pre-IB):

Students will expand their knowledge of algebra and geometry while preparing for the AP Calculus courses and the IB exam. Topics will include (but not be limited to):

- Functions
 - Families of functions
 - Building complicated functions from simple ones
 - Finding domain and range
 - Asymptotes and removable discontinuities
 - Graphing by hand and/or with a calculator
 - Looking for features of a graph
 - Applications of functions
 - Inverses
 - Finding patterns and relationships between functions
- Introductory calculus concepts (note: this is only taught at the introductory, conceptual level)
 - Limits
 - Introduction to Derivatives
 - The definition of the derivative
 - The meaning of derivatives (slope, rate of change)
 - Short-cuts to finding derivatives
 - Power rule derived from Binomial Expansion Theorem
 - Sum, product and quotient rules
 - Chain rule
 - Applications to differentiation
 - Introduction to Integration
- Right triangle trigonometry
 - sin, cos, tan, csc, sec, cot
 - What do they mean?
 - Applications
 - Graphing as a function
 - Modeling
 - Inverses and applications
- Non-right triangle trigonometry
 - Law of sines and law of cosines
 - Concepts behind these laws
 - Applications

AP Calculus BC (including Mathematics SL students who also take the BC exam):

A paper copy of a complete topic listing with amplifications can be provided upon request. This information is also available online on the College Board website. This course extends many of the topics from AP Calculus AB plus includes additional calculus topics such as polar, parametric, and simple vector equations; sequences and series, including Taylor and Maclaurin Series and Power Series.

Students testing out of IB Mathematics at any level will also have a required Internal Assessment.

AP Computer Programming (A):

A paper copy of a complete topic listing with amplifications can be provided upon request. This information is also available online on the College Board website.

Here is an outline of major topics:

- Object-Oriented Program Design
- Program Implementation
- Program Analysis
- Standard Data Structures
- Standard Algorithms
- Computing in Context

Additional detail:

- Computing in context
 - Major hardware components
 - Primary and secondary memory
 - Processors
 - Peripherals
- System software
 - Language translators/compilers
 - Virtual machines
 - Operating systems
- Responsible use of computer systems
 - Privacy
 - Legal issues and intellectual property
 - Social and ethical ramifications
- Program analysis
 - Representations of numbers in different bases
 - Constraints to storage of numbers in memory
 - Testing
 - Debugging
 - Reasoning from pre- and post-conditions
- Object-Oriented program design
 - Understanding problem statements through pre- and post-conditions
 - Applying data abstraction and encapsulation
 - Relationships among classes (“is-a” and “has-a”)
 - Class hierarchy
 - Creating reusable components with documentation
 - Class design
 - Designing and implementing a class
 - Choosing appropriate data representations and algorithms
 - Applying functional decomposition
 - Extending a class using inheritance
- Program implementation
 - Implementation techniques
 - Programming constructs
 - Declaration
 - Input/Output
 - Control

AP and IB Physics Courses:

These courses will include the curriculum as outlined by the official AP and IB curriculum outlines published by the College Board and International Baccalaureate. These documents are available online. Due to the large number of options available and the multiple courses combined into one class period, the advanced-level Physics classes may contain a significant amount of independent-study.

Students testing out of IB Physics at any level will also have a required Internal Assessment.

IB Computer Science 2 (SL):

A paper copy of a complete topic listing with amplifications can be provided upon request. This information is also available online on the International Baccalaureate website.

This is only an outline of major topics:

- Systems life cycle and software development
 - The systems life cycle
 - Systems analysis
 - Systems design
 - Social significance and implications of computer systems
 - Software life cycle
 - Software design
 - Documentation
- Program construction in Java
 - Refer to various paper hand-outs and the textbook for details.
- Computing system fundamentals
 - Language translators
 - Computer architecture
 - Computer systems
 - Networked computer systems
 - Data representation
 - Errors
 - Utility software
- Analysis and practice with the case study

Topics from AP Computer Science (A) will be included and expanded upon.

Students will submit an Internal Assessment involving the complete development process of a major program.

IB Computer Science 3 (HL):

A paper copy of a complete topic listing with amplifications can be provided upon request. This information is also available online on the International Baccalaureate website. HL includes all of the topics from SL but approached at a higher level of understanding. Additionally, HL students have these added topics:

- Computer mathematics and logic
 - Number systems and representations
 - Boolean logic
- Abstract data structures and algorithms
 - Fundamentals
 - Static data structures
 - Dynamic data structures
 - Objects in problem solutions
 - Recursion
 - Algorithm evaluation
- Further system fundamentals
 - Processor configuration
 - Magnetic disk storage
 - Operating systems and utilities
 - Further network fundamentals
 - Computer/peripheral communication
- File organization
- Analysis and practice with an **extended** case study

Topics from AP Computer Science (A) and IB Computer Science 2 will be included and expanded upon.

Students will submit an Internal Assessment involving the complete development process of a major program and incorporating higher-level constructs.