

Mrs. Tigges

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Welcome to AP Computer Science! This sheet will help to explain the course and what is expected of you. Be sure to ask questions if there is anything you do not understand.

Course Description: AP Computer Science is designed to serve as a first course in computer science for students with no prior programming experience. The course is meant to be the equivalent of a first-semester college-level course in computer science. Student will focus on problem solving by developing computer programs or parts of programs that correctly solve a given problem. Students will explore and learn about design issues that make programs understandable, adaptable, and, when appropriate, reusable. In writing effective and useful programs, students will also develop and analyze algorithms, develop and use fundamental data structures, and learn about typical applications of standard algorithms. This course will prepare students to take the Advanced Placement Examination in May. Students may earn college credit depending on the results of the examination.

Alignment to the Iowa Core Curriculum: Understands and applies concepts of mathematics for information processing, recursion and iteration.

COMMENT: This course may not count as a math credit at all four-year colleges.

Standards: This course addresses 21st Century Skills, specifically Technology Literacy, from the Iowa Core Curriculum.

Assessments: Tests in this course will be paper/pencil in order to prepare for the AP exam. Tests are meant to be difficult and are typically curved, as is the AP exam. Tests are to be completed in one class period. There will also be informal assessments through the unit, both for me to check on your progress and for you to self-assess.

Content:

Using Objects	Decisions	Interfaces/Polymorphism
Implementing Classes	Iteration	Designing Classes
Fundamental Data Types	Arrays and ArrayLists	Recursion
Programming Graphics	Inheritance	Sorting and Searching

Instructional Strategies: A variety of instructional strategies will be used, including working individually, collaboratively, and in teacher-led activities.

Resources:

1. **Your textbook** – *Objects First with Java*, by Barnes & Kolling, copyright 2012
2. **The internet**-- We will use this to help us program, and I will share many documents and assignments online.
3. **Optional:** If you want to work at home (not required!), you will need to download the following *free* software:
 - a) Java SE 8 (google "Java JDK" and it should be the top result)

In order to run the newest version of Java, you need Windows Vista or newer. Java is also available for Linux, Oracle Solaris and Mac (OS X).

b) BlueJ www.bluej.org

This is our text editor (or IDE, Integrated Development Environment. Fancy, huh?). There are many others available, including Netbeans, Eclipse, and IntelliJ. If you are a beginner, I recommend sticking with BlueJ. That is what we will use in class. If you would like to experiment with other IDEs though, please feel free! If you pursue CS, you will probably end up using another environment later.

Academic/Behavioral Expectations

- This is an honors level course. I expect you to behave as the responsible students that you are. Should a problem arise, I may contact your parents and/or pursue assistance from the office.
- If you want help with the course, please come and see me before or after school in the Math Office. You can also install BlueJ on any school computer through the software center, so you can work in the library or LRCs.
- Plagiarism or cheating on anything for this class (tests, quizzes, assignments or projects) will not be tolerated. Consequences may include, but are not limited to, a score of zero on the work, contacting your parents and/or Assistant Principal, or an F in the course.
- If you miss class *for any reason* it is **your responsibility** to get the assignment. I will not track you down to give it to you. If there was a handout on the day you were absent, check online. If you know you will be absent from class, be sure to get the assignment before you leave.
- If you miss class on a test/quiz day, you will be expected to take the test/quiz within **one week** of returning to school. If you miss the day before a previously announced test/quiz, you will be expected to take the test/quiz with the rest of your class. (If you missed more than one day see me to arrange a suitable due date.) If a quiz or test is not made up by the assigned time, it will receive a score of zero. This is YOUR responsibility -- I will not remind you.
- Excessive absences (excused or unexcused) or tardies will be referred to the assistant principal, following the building policy.

Grading Plan

Your grade will be based on the following:

1. **Tests/Quizzes** – Tests will always be announced in advance. Typically, these are worth 50-80 points.
2. **Programming assignments or projects** – Assignments are usually due at the end of the chapter. You may turn assignments in late for a 15% deduction per day. Typical point values are between 20 and 40 points per unit.
3. **Semester Exams** – Your final exam will count for approximately 20% of your semester grade.
4. **Extra Credit** - I may make small amounts of extra credit available at various times during the year – but don't count on it. Extra credit will not be available during the last week of each semester. When extra credit is assigned a due date, *none will be accepted late*.

Your grade will be based on the following scale:

93.0 and up	A	87.0 – 89.99	B+	80.0 – 82.99	B-
90.0 – 92.99	A-	83.0 – 86.99	B	77.0 – 79.99	C+

73.0 – 76.99	C	67.0 – 69.99	D+	60.0 – 62.99	D-
70.0 – 72.99	C-	63.0 – 66.99	D	Below 60%	

Communication

PowerSchool will contain updated information about your grade. You can also contact me at jtigges@dbqschools.org at any time.