

AP Computer Science A Syllabus 2020-21

Contact information:

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School phone: 515-965-9610

Room: 1104

Class WebSite: Edhesive - available through Google Classroom

Communication:

It is essential that you regularly check our course website and your school email. Failure to do so may result in missing important information including assignments, due dates and suggestions for success. Email is the best way to advocate for yourself. We will also set up a Remind account for critical information and messages. When setting up your remind account use the email or phone number you access frequently.

Course Information:

Credits: 1 math credit per semester (2 credits)

Pre-requisite: A grade of C or better in Computer Science Principles or instructor approval

Text: Online Resource:

Eck, David J. "[Introduction to Programming Using Java.](#)" Hobart and Williams Smith Colleges, 17 May 2013. Web. 09 July 2013.

An additional physical book may be checked out from the Media Center upon request. This book is by a different author and is a text commonly used at universities. "Starting out with Java Early Objects." 6th edition, Tony Gaddis

Software:

- A Java Compiler will be necessary. Edhesive uses DrJava. Other compilers you could use are Eclipse, BlueJ or NetBeans. Our class site will step you through how to install and use DrJava
- Repl.it may also be used for testing and experimenting with code.

Software Note: The software is available for free. Software will also be available on some computers in the media center. If software availability is a concern, immediately discuss this with your instructor. We have several options to help you be successful but you need to communicate your need.

Follow up Courses: Visual C#, C++ Programming, Introduction to Game Design, Introduction to Python, Accounting, Web Design, Entrepreneurship, Graphic Design Courses

Grading:

18 week grade: 100% of your 18 week grade will be based upon summative assessments given for each standard.

Summative assessments may include quizzes, projects, activities and programs.

A suggested break down of which standards will be covered each semester follows:

Term 1 will focus on:

1. Java Basics
2. Algorithm Design (Decision Structures and Iteration)
3. One Dimensional Arrays and Strings
4. Methods including Recursion
5. User Defined Classes

Term 2 will focus on:

6. Inheritance and Polymorphism
7. Sorting and Searching Algorithms
8. Two Dimensional Arrays
9. Basic GUI applications
10. Career Skills

Note: We are participating in the Amazon Future Engineers program this year through an online environment sponsored by Edhesive. Any mention or comments about grading within the Edhesive material does not apply as they are not grading using Standards Based Grading. Your grades will be determined by your performance on each standard throughout the course. Points awarded via the Edhesive environment are only a guideline as to how you are performing - not your actual grade.

Formative and Summative Assessment:

Definitions

- **Formative Assessment:** Formal and informal processes teachers and students use to gather evidence for the purpose of improving learning. Activities on our classroom site will be mostly formative assessments. Free response practice questions will be formative.
- **Summative Assessment:** Assessments that provide evidence of student achievement for the purpose of making a judgment about student competence or program effectiveness. Quizzes, Exams and in class coding challenges will be used as summative assessments.

Multiple and Varied Assessment Opportunities

Labs, Lectures and Activities are designed to support learning the course objectives. Many are formative assessments and will not be placed in the gradebook. **You are expected to participate in and complete all labs and activities unless otherwise noted.** This is to prepare you for the summative assessments. **If formative work is not completed prior to a summative assessment, reevaluation opportunities are not automatically granted.**

Guidelines for reassessment opportunities include the following:

- Students will be provided the opportunity to be reassessed - best practice is to provide additional opportunities for students to demonstrate learning during future assessments.
- Teachers determine appropriateness and authentic need for reassessments.
- Reassessment method will be provided at the discretion of the teacher.
- Reassessments will be given within a reasonable time frame that the teacher determines and students will be communicated with in advance.

This course follows the grading practice outlined by the Ankeny Community School District as posted on the school website. There is no extra credit. Opportunities for reassessment are available if an authentic need has been shown. **See note above about completing formative activities/work prior to assessments.**

Often there will be suggested reading and exercises during a unit. It is expected that you are reading these assignments. I do not lecture over the exact material that is presented. You are responsible for all material in each unit unless otherwise indicated so it is in your best interest to go above and beyond in your preparation. The book is meant to complement class lectures and labs. Doing additional practice will strengthen your skills. If you are not reading the textbook and/or completing the activities reassessment is not guaranteed.

Homework / Independent Practice

Homework is an opportunity for students to practice skills, apply knowledge, review and build on past learning, and extend learning. Homework is individualized and based on each student's progress towards established standards. The purpose of the assignment will determine whether or not a grade is given and will be clearly articulated to students. Through independent learning tasks (homework), students assume more responsibility for their learning and are given opportunities to apply what they have learned to new situations or experiences. Homework in this course will include activities, labs, video lectures and in class exercises. Students will be encouraged to use many avenues as possible, such as taking notes, coding, watching help videos, peer reviews, setting up a help session, and partner coding in order to master the concepts being taught.

Grading Scale per the student handbook.

A proficiency scale will be used to determine your letter grades.

Letter Grade: A
Minimum Percent: 92.5

Letter Grade: A-
Minimum Percent: 89.5

Letter Grade: B+
Minimum Percent: 86.5

Letter Grade: B
Minimum Percent: 82.5

Letter Grade: B-
Minimum Percent: 79.5

Letter Grade: C+
Minimum Percent: 76.5

Letter Grade: C
Minimum Percent: 72.5

Letter Grade: C-
Minimum Percent: 69.5

Letter Grade: D+
Minimum Percent: 66.5

Letter Grade: D
Minimum Percent: 62.5

Letter Grade: D-
Minimum Percent: 59.5

Letter Grade: F (below 59.5)

Computer Science Generic Proficiency Scale

Advanced (4) The student demonstrates learning beyond the expectations of proficiency and connects current concepts with past concepts (generally in the A range).

Meeting (3) The student demonstrates learning that meets the expectations of proficiency (generally in the B range).

Progressing (2) The student demonstrates learning that partially meets the expectations of proficiency (generally in the C range).

Beginning (1) The student demonstrates learning that begins to meet the expectations of proficiency. However, There are major errors or omissions in their learning (generally in the D range).

Insufficient (0) No evidence or success, with or without help or not enough work is completed to determine proficiency (failing status).

The work habits/behavior standards are for grades 6-12 courses in our district. Work habits/behavior progress will be reported throughout the semester and are as follows:

- Organization and Readiness
- Productivity and Accountability
- Collaboration Skills

For those of you accessing this document electronically, the work habits tool can be accessed online: [Work Habit Tool Online Link](#). We will be using the following performance levels

Performance Levels for Work Habits/Behavior Standards:

MS = Meets Standard

PM = Partially Meets Standard

DM = Doesn't Meet Standard

NE = No Evidence

These descriptors are intended for feedback and communication and do not impact a student's GPA.

Warning: Incomplete grades do not affect your grade positively or negatively. Therefore, if you have several Incompletes your grade on Infinite Campus will not truly reflect your final standing. Be aware that any incomplete grades will turn to an F at the end of the course.

NEED HELP?

I will be available by appointment for help. However, email is the best way to let me know you may be struggling and to get individual help. Study skills will be very important in this class. Use a planner for organization. Time Management is essential. You must use all of your lab time efficiently. If you struggle, I can and will help but you have to talk to me and advocate for yourself!

Absences

This is not a course to miss frequently. We do much of the work in class during lab time. It is recommended that you make up work within two days of being absent. Please make arrangements if you are gone or will be gone. Work that is not completed will be given an Incomplete that will turn into a failing grade at the end of the semester if it is not made up by the deadline. This is your responsibility.

My Personal Guidelines:

Five essential life skills – no matter where you are!!!!

- **Honesty:** Be honest in conversation, daily work, quizzes/tests, etc.
- **Respect:** Respect yourself, other people, personal property, other's class time, your school and community.
- **Positive Attitude:** Attitude and effort are the keys to success.
- **Be Prepared:** Do your homework, bring your supplies and be ready,
- **Relaxed environment:** I want you to feel that you can ask questions at any time no matter how small or big. This helps me help you and it also helps your classmates. Be aware, I may direct you to the online resource that will help you answer or find the solution to your question. In other words, I will constantly be teaching you how to teach yourself which is essential if you wish to pursue a career in computer science.

Online Resources: Check our class website

PROGRAMMING GUIDELINES FOR GRADING

Grading of programs or coding exercises will be based upon the following general guidelines in addition to specific chapter/standard expectations.

- Your program score will be based upon the quality and efficiency of the solution. Simply producing the correct output does not guarantee a grade.
- All files must be submitted on time per instructions given in class.
- All programs must include documentation.
- Programs should include test data when appropriate.
- All written requirements/instructions/specifications must be implemented.
- Current learning objectives must be met
- Coding demonstrates continued application of previous learning.

Additional Course Expectations and Suggestions for Success

- **It is expected that you are using all of your lab time efficiently.**
- Texting, emailing, games and surfing the web are not part of this course and should not be done in class.
- You are free to listen to music as long as it is not during lecture time. Always, the music should not be so loud that I can't get your attention.
- Take notes during lecture time. Generally I will plan on 2 days of lecture per week and the other days are lab days. It is expected that you are listening and participating during lecture. I will strive to give you as much lab time as possible.
- Plan on spending at least 2 -3 hours outside of class per week. Quality study time is better than quantity of time filled with distractions. Reduce all distractions when you study. No TV, Gaming, Texting, Tweeting, Email, etc. Classical music is the best for retaining concepts. Set a timer to motivate yourself to get a task done in a specified amount of time.
- Use alternative resources to further your understanding - Google frequently.
- Plan the amount of time you think it will take and then **triple the time.** (I'm serious). Some Assignments/Labs may require extensive time to complete. **PLAN AHEAD.**
- Read and take notes over each unit. Be sure to ask questions or email questions about what you do not understand.
- Create flash cards or study cards for new vocabulary
- Lab time must be used wisely and efficiently. You will run out of time for practice and assessments if you do not.
- It is expected that you frequently access the course website for updates. You are responsible to know and meet all due/cutoff dates and times. All communication for this course will be through the CourseSites Website and/or through the email you provided me for CourseSites.
- Facilitator reserves the right to make reasonable changes to any due/cutoff date and time.
- All submissions may be shared with others.
- Turn in work on time- pay attention to scheduled due dates
- Cheating and dishonesty of any form will result in appropriate disciplinary action

District Information

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