# Lebanon Community Schools
High School Course Syllabus

## Lebanon High School | Mr. Tim Helland | 2018-2019

**Course Number and Title:**

Introduction to Computer Science

**Subject Area:**

Computer Technology

**Credits:**

Semester 1    0.5 *CT* or *Elective* Credit

**Graduation Requirements:**

The following Oregon Essential Skills will be addressed during this course:

| | | | |
|---|---|---|---|
| **x** | Read and comprehend a variety of text | **x** | Use technology to learn, live, and work |
| | Write clearly and accurately | | Demonstrate civic and community engagement |
| | Apply mathematics in a variety of settings | **x** | Demonstrate global literacy |
| **x** | Listen actively and speak clearly and coherently | **x** | Demonstrate personal management and teamwork skills |
| **x** | Think critically and analytically | | |

**Prerequisites:**

None

**Course Overview:**

In this course you will have an opportunity to investigate of variety of topics including: web development, animation, video games, the design process, data and society, problem solving and physical computing.  Each of these is an essential component of modern computer sciences and careers that use computer technology.

In this course you will:
- Use computers to solve a variety of problems
- Communicate ideas using web content
- Explore intellectual property rights
- Create interactive art
- Write code to complete basic tasks
- Use the Design Process to create, test, and iterate
- Understand a variety of data representations
- Use digital security measures
- Write programs that manage hardware input and output

**Topics of Study:**

**Unit 1:  Problem Solving**
*About 2 weeks*
- Puzzles
- Challenges
- Real World Scenarios

**Unit 2:  Web Development**
*About 4 weeks*
- HTML
- Digital Footprint

**Unit 3:  Animations and Games**
*About 4 weeks*
- Interactive Art
- Coding

**Unit 4:  The Design Process**
*About 2 weeks*
- Social Impact
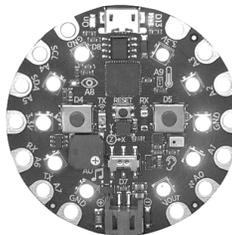- Teamwork
- Prototyping

**Unit 5:  Data and Society**
*About 2 weeks*
- Patterns and Structure
- Representations
- Automation

**Unit 6:  Physical Computing**
*About 4 weeks (as time allows)*
- Circuits
- I/O
- Physical Prototypes

## TAG/ELL/Special Education Considerations:

If you desire accommodations on assignments due to an IEP or the need for more academic challenge (TAG), please talk to your teacher, and alternative assessments may be created between the teacher and student on a case by case basis. You will be pre-assessed on the knowledge and skills that you bring with you to this course. The purpose of the pre-assessment is to determine what you already know, guide instruction, and give you access to advanced and/or accelerated content when appropriate.

Formal or informal pre-assessments may include quizzes, student input and self-evaluation, placement tests, teacher observation, work samples, fist of five, thumbs up/thumbs down, and other forms of assessment. The following differentiation strategies will be used during instruction when appropriate: Enrichment, Multiple Intelligences, Acceleration, Compacting, Independent Projects, Assignment Modification, Tiered Assignments, and Student Contracts.

## Supplemental Resources:

A variety of resources will be available on the following websites:
http://introcs.timhelland.com
http://www.code.org
http://learn.adafruit.com
If you have limited Internet access, please see the teacher for an alternate method of access.

## Academic Honesty Policy:

Plagiarism and cheating are <u>unacceptable</u> in any classroom. Students who submit work that is not their own may receive a score of zero and/or be referred to the administration for disciplinary action.

You are encouraged to help your peers understand and make progress. But, don't just give them your work. If multiple students submit work that is not sufficiently unique, the points for that work will be divided equally amongst them.

## Homework Policy:

The majority of learning activities in this course are designed so that most students will complete them during the class period. If you do not complete a task during the class period you may find it necessary to complete work at home or schedule time to complete the task in the lab before or after school.

Late assignments are accepted, but will incur a 10% deduction for the first week and an additional 10% deduction thereafter. No late assignments will be accepted during the last week of the term.

## Behavioral Expectations:

To maintain a positive and productive learning environment each member of our classroom agrees to:
❖ Respect others with words and actions.
❖ Be seated and ready to begin when the bell rings.
❖ Use spill-proof containers for beverages and leave food at the door.
❖ Turn off and put away cell phones and entertainment devices unless otherwise directed by the teacher.
❖ Clean up before leaving the classroom.
❖ Follow the LHS Student Handbook and Network & Internet Use policies.

## Grading Policy:

Your overall letter grade is weighted as follows:

| Tests<br>Quizzes | 40% |
|---|---|
| Labs & Assignments<br>Projects<br>Notebooks | 50% |
| Final Exam | 10% |

Your letter grade will be determined as follows:

A.....................90% or above
B......................80% to 89%
C......................70% to 79%
D......................60% to 69%
F .......................Below 60%

You are encouraged to attempt any/all of the extra credit opportunities provided. However, extra credit may only affect your overall grade by up to 3% per district policy.

## Labs & Assignments:

Many assignments will be scored based on a detailed rubric or set of grading criteria. All other labs and assignments will earn a percentage of the total points possible. For example:

| Complete & carefully attempted | 100% |
|---|---|
| More than half carefully attempted | 60% |
| Less than half carefully attempted | 20% |
| Far from complete or insufficient effort | 0% |
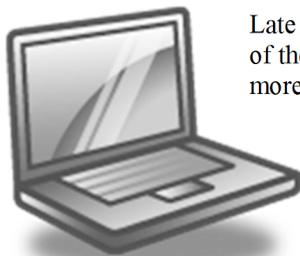
Late assignments will lose 10% of their earned value (20% if more than a week late).

## Assessments:

*Unit Tests* are worth 100 points each and are announced in advance. You <u>may</u> use your own handwritten notebook during a test. You may retake each test once after successfully completing a review activity. Your original score and retake score will be averaged.

*Quizzes* worth more than 10 points are announced in advance.

The *final exam* is 10% of the final grade and may include both a written and performance component.

Unless permission is granted by the teacher *in advance*, using personal electronic devices during an assessment will result in a score of 0.

## Excused Absences:

When you return to school, be prepared to make up any missing work within the number of days you were absent + 1 day. For one week following this deadline there will be a 10% late penalty and 20% thereafter.

Special consideration can be made for extended absence or verified emergencies. Be sure to contact the teacher as soon as possible.

## Notebook:

A notebook is required for this course. It should include all of the following:
- ❖ Cornell notes
- ❖ In-class activities
- ❖ Unit vocabulary
- ❖ Weekly reflection
- ❖ Other course materials

You will be allowed to use your written notebook on tests and quizzes. This includes the final exam. Be sure to take accurate, organized, and readable notes.

Each unannounced notebook check is worth a possible 20 points. Your score is based on possession, organization, and completeness on the day of the notebook check. Use the *Cornell Notes* system to receive full credit on your notebook.

Late notebooks will lose 10% of their earned value (20% if more than a week late).

## Projects:

Projects may be assigned depending on available time. You may need to work on projects outside of class if you get behind.

Late projects will lose up to 10% of their earned value (20% if more than a week late). If you have a concern about your progress on a project, please speak with the teacher at least two days prior to the due date.

## Unexcused Absences:

If you have an unexcused absence, you will not be able to makeup in-class activities. Projects or unit tests that reflect many days of learning can be made up, but will lose a portion of their value based on the number of unexcused absences affecting that unit or project.

If you are present but choose not to take a test or quiz with the class, your future score will be reduced by 10% (20% if more than a week has passed).

## Course Goals:

- Improve problem solving strategies through puzzles, challenges, and real world scenarios
- Create and share content using web pages
- Use computers and digital hardware to create interactive programs
- Consider the broad social impacts of computing and digital data
- Implement the engineering design process at a basic level
- Explore the relationships between input, storage, processing, and output in computer systems

**Contact Mr. Helland:**

| | |
|---|---|
| | Lebanon High School – Room 721 |
| | (541) 451-8555 ext 1090 |
| | tim.helland@lebanon.k12.or.us |
| | https://www.timhelland.com |

**Mr. Helland's Schedule:**

| 1 | Intro to Computer Science |
|---|---|
| 2 | Intro to Computer Science |
| 3 | 3D Game Programming |
| 4 | *Preparation* |
| 5 | Intro to Computer Science |
| 6 | Intro to Computer Science |
| 7 | Web Design 1/2 |

**Materials:**

In addition to basic school materials, the following materials are strongly suggested for this course:

***3-ring or spiral notebook***
It will be turned in to the teacher at the end of each unit.

***Portable or Online Storage***
A USB Storage device or Google Drive account may prove useful and convenient in this course.

***Home Computer***
A computer running a modern operating system such as Windows 7 or Mac OS X may be useful if you get behind or want to explore deeper into Web Design.

**I Need Help!**

There are many resources available to you if you get stuck or don't understand. Some of them are:
❖ Your teacher
❖ Peer study groups
❖ Your teacher's website
❖ Course website
❖ Online videos
❖ Online tutorials
❖ Tutoring
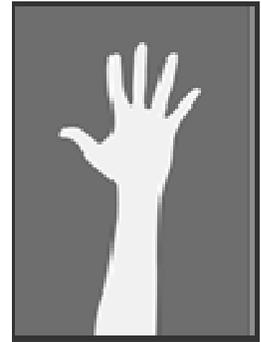
You will be creating an account with Code.org to complete your course assignments.
Visit this link to create your account and connect to our classroom:
http://studio.code.org/join/KMGLSM

*With advance notice, the teacher reserves the right to adjust these guidelines to provide a safe and productive learning environment for all students.*