LUHS

Engineering

Introduction to Computer Science

PLTW

SYLLABUS INFORMATION PACKET

Introduction to Computer Science (ICS)

Meets Monday through Friday

4th Period in Room 115

Instructor: Mr. Raddatz

Phone and Voice-Mail: 715 356- 5252 ext. 1170

E-Mail: raddatz@lakelandunion.org

Mr. Raddatz's Schedule:

Mr Raddatz Phone and Voice-Mail: 715 356- 5252 ext. 1170 raddatz@lakelandunion.org

General Course Information

Introduction to Computer Science

Credit Value: One-half credit
Open to: All Grade levels
Prerequisites: none

What you will learn in this course:

Beyond learning the fundamentals of programming, in this one semester course - students build computational-thinking skills by applying computer science to collaboration tools, modeling and simulation, and data analysis. In addition, students transfer the understanding of programming gained in App Inventor to text-based programming in Python® and apply their knowledge to create algorithms for games of chance and strategy.

How you will learn in this course:

The course aims to develop computational thinking and build student excitement. Several days in each module are targeted to build career awareness about computing skills in all fields. Student teams create an **Android®** interface to solve a problem the team defines. Students learn fundamental computer science (CS) concepts and work in teams to create apps for mobile devices using MIT App Inventor®. They explore the impact of computing in society and build skills in digital citizenship and cybersecurity.

- **MIT App Inventor**
- **Python®**

Why this course is important:
People who code are the magicians of the future, useful in any career. Students will collaborate to create mobile apps that make a difference in people's lives. Solve real people's needs and wants with your creativity. With a gentle introduction to programming, you will learn how to make computers work together to put your designs into practice.

How will computing and connectivity give you superpowers?

- Breaking big problems into little ones
- Being persistent
- Building solutions in small steps
- Being creative
- Trying out your ideas

C. Performance Expectations

Students attend both lecture/demo and lab settings that will help them acquire an understanding of the subject.
They will have hands on lab setting to put to use information gained in the lecture/demo settings. They will be expected to complete assignments, labs and participate in class.
A major part of the coursework will focus on a professional product called an “Engineering Notebook” which each student will generate over throughout the course. This is also referred to as a “portfolio” and will be a substantial factor in each student’s course grade.
The vast majority of assignments, handouts, course materials and deliverables are in a purely digital format.

D. Student Expectations

Student Safety Contract;
https://docs.google.com/document/d/1r05o4cAbkTpYVv_Na7vwckY7lSblKtwPnSbb1gqbKc0/edit?usp=sharing
THERE WILL BE MATH!
STUDENTS WILL HAVE HOMEWORK!
Students are expected to treat all members of the class with respect. Additionally, they are expected to attend class, participate in a variety of class activities, and give their best effort on a consistent basis.
•Follow safety rules at all times.
• **Use of cell phones and electronic entertainment devices are not allowed at all**.
• Respect everyone.
• Do not touch other student’s projects or property.
• Do not touch or operate equipment unless approved by your teacher.
• Be a good listener - follow directions.
• Be on time. At the beginning of class, stay in your seat for attendance. Do not start any work until instructed.

• No food or drink in the lab areas.

E. Grading Plan

Grades will be calculated on a total point basis. The scale is as follows:

90 - 100 = A	70 - 79 = C	Below 60 = F
80 - 89 = B	60 - 69 = D	

Trimester grades will be weighted using the following percentages:
65% Assessment 35% Portfolio
There will be a **cumulative final test which will count as 6% of final grade**.

Unit #1 Mobile Computing

1.1 The computing Revolution 1.2 Putting Together the Pieces
1.3 Collaborate to Solve Problems

Unit #2 Crowds and Clouds

2.1 Coding for the Crowd 2.2 Cracking the Code

F. Schedule

Important Dates

See school website

Cumulative final Test Day to be determined

G. Other Information

If you need extra help;

Go Online:

https://my.pltw.org/user/login?destination=node/1

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During prep periods:
If you wish to meet with me during one of my prep periods, **see me in advance** for a pass from your learning lab.

Before and after school:
I am likely to be in or around room 117 before school and after school.

Anytime:
In addition, you or your parents or guardians may contact me via: voice-mail at 356-5252 ext.3017, or e-mail at raddatz@lakelandunion.org

Online sites for reference;
http://www.pltwwi.org/
http://cws.gtc.edu/programs/objects/Digital_Electronics.htm
http://ptgmedia.pearsoncmg.com/images/chap3_0130619701/elementLinks/chap3_0130619701.pdf
http://isweb.redwoods.cc.ca.us/instruct/calderwoodd/diglogic/

I'm here to help you learn and succeed, not to put up roadblocks. Please let me know how I can be of assistance to you. This is a challenging course and it can be rather math intensive at times.

Mr. Raddatz

because

WE CARE

Community	**AS ONE!** *I belong, You belong, We belong*
Accountability	**OWN IT!** *My acts have impacts*
Respect	**CHECK YOURSELF!** *You must inspect what you expect*
Energy	**PLUG IN!** *Power your purpose with passion*