Introduction to Computer Science & Technology ES
Course Syllabus
2026 - 2027

Lexington High School
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Student's Name: _____

Class Purpose

This course develops students' abilities to analyze, evaluate, and reflect upon technologies such as computer hardware and software, networking and security. Students will learn the fundamentals of programming, build computational thinking skills, and reflect on the impact of computing on society. **This class is required for graduation**.
The class is also a great opportunity to learn, strengthen and apply knowledge in the following areas:

- Engineering
- Problem solving
- Tool use - common and no common tools
- Math
- Communication skills

Nebraska Revised Statute 79-3303 states that computer science and technology includes, but is not limited to, knowledge and skills regarding computer literacy, educational technology, digital citizenship, information technology, and computer science.

Computer Science: The study of computing systems and algorithmic processes, including their principles, their hardware and software designs, their applications, programming, networks, data, and their impact on society (Adapted from K12cs.org; Tucker et. al, 2003). Computer science builds on computer literacy, educational technology, digital citizenship, and information technology (K12cs.org).

Computer Literacy: General use of computers and programs (i.e., computer applications) such as productivity software. For example, performing an Internet search or creating a digital presentation.

Educational Technology: Applies computer literacy to school subjects. For example, students in an English class can use a web-based application to collaboratively create, edit, and store an essay online.

Digital Citizenship: Appropriate and responsible use of technology, such as choosing an appropriate password and keeping it secure.

Information technology: development, maintenance, and use of computer systems, software, and networks for the processing and distribution of data.

This course was designed to cover the needs for Computer Science standards in Fundamentals of Computing (270704). This is the beginning course of the Computer Science Pathway for NDE's Program of Study under Communication and Information Systems. Other lessons were added to meet the needs of Computer Science Principles (270703).

Introduction to Computer Science & Technology ES	
Week 1	**Module 1: Digital Citizenship**
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	**Module 2: Concepts of cybersecurity**
Week 7	
Week 8	
Week 9	**Module 3: Physical Computing**
Week 10	
Week 11	
Week 12	**Module 4: Network**
Week 13	
Week 14	
Week 15	

Week 16	
Week 17	**Module 5: Programming & Debugging**
Week 18	
Week 19	

Objectives

For the student to achieve:

1. Understand the history of computer science
2. Determine what a digital footprint is
3. Define information literacy
4. Define digital organization
5. Understand computer hardware
6. Define polymorphism and data manipulation
7. Know how to collect data and use it correctly
8. Construct algorithms
9. Describe a binary system
10. Define data abstraction
11. Understand and define the fundamentals of programming
12. Understand what application design and debugging entail
13. Variables, conditionals, and functions
14. Understand and explain the history of the Internet
15. Detail and describe the physical components of a network
16. Identify the digital components of a network
17. Understand what cryptography and data encryption entail

Learning Modules

1. Digital Citizenship
2. Cybersecurity
3. Physical Computing
4. Problems & Solutions
5. Networks
6. Programming & Debugging

Resources

Google Classroom Course / Code Course (Code.org) / Other printed materials

Grading

Tests/Quizzes (**50%)** + Projects (**30%)** + Homework/Activities (**20%) = 100%**

Quarter 1 (**45%**) + Quarter 2 (**45%**) + Semester Final (**10%**) = **100%**

Late Work

All assignments have a due date. I expect all work to be turned in on time.
20 points will be deducted for every day it is late. After 4 days it will be counted as a "0%"

Misconduct

Misbehavior in class, failure to participate, or refusal to work on class activities will be penalized in accordance with school regulations and may result in a reduction of grades. Please note that improper use of the equipment may result in damage, requiring the student to replace the equipment or cover its cost.

Classroom Expectations and Procedures:

- Come to class prepared (Charged chromebook, pencil, paper, etc.)
- Respect one another
- Listen wholeheartedly when others are speaking
- Speak with good purpose
- Be accountable for your actions
- Learn from failure

Beginning of Class:

- Place phones in backpack (No tolerance policy)
- Find your seat, take out supplies needed for class (CHARGED COMPUTER, pencil, etc.)
- When finished, sit quietly and wait for further instructions

During class:

- Actively participate in class
- Keep order
- Be respectful

End of Class:

- Clean up your area (paper on floor around you, your supplies, put extension cords away, etc.)
- Sit IN seat until the bell rings. DO NOT LINE UP AT THE DOOR!!!!
- Push in your chair and leave the room quietly

I acknowledge the course content to be covered in my child's class: _____, and I clearly understand how the assessment will be conducted. I commit to helping my child study and encouraging them to do their best to achieve excellent results in the class.

_____

Signature of parent or guardian

Lexington, August 2026