

## WHY STUDY COMPUTING?

- Computing is part of everything we do!
- Expertise in computing enables you to solve complex, challenging problems.
- Computing enables you to make a positive difference in the world.
- Computing offers many types of lucrative careers.
- Computing jobs are here to stay, regardless of where you are located.
- Expertise in computing helps you even if your primary career choice is something else.
- Computing offers great opportunities for true creativity and innovativeness.
- Computing has space for both collaborative work and individual effort.
- Computing is an essential part of well-rounded academic preparation.
- Future opportunities in computing are without boundaries.

*Source : ACM (Association for Computing Machinery)*

Invest in your children's future  
by giving them the essentials  
for competitive edge  
in the fast-paced, highly competitive  
information age



**oregon cyber**  
learn.practice.collaborate

**SOFTWARE ENGINEERING ACADEMY**

**Learn. Practice. Collaborate**



**Beaverton, OR, U.S.A.**  
**503-803-0498**  
**[www.oregonyber.com](http://www.oregonyber.com)**



## WHY OREGON CYBER?

- We are dedicated to teach software engineering knowledge, skills, and real practices to elementary, middle, and high school students (8 years old or older).
- Our students will not only learn how to develop computer programs, but also how to follow good engineering processes to deliver them successfully, which includes learning requirement gathering and analyzing, designing, developing, and testing.
- They will learn programming fundamentals from rules of logic, problem solving, algorithm, data structures, to actual implementation.
- Importantly, our students will also experience working and collaborating in a team applying the knowledge they learn into real world practices.
- Students will be taught by software engineers with years of working experience in software industry and in teaching software to youth.



## CURRICULUM

- LOGIC & PROBLEM SOLVING
- INTRODUCTION TO SOFTWARE DEVELOPMENT AND LIFE CYCLE
- OBJECT-ORIENTED DESIGN & PROGRAMMING
- ALGORITHM & DATA STRUCTURE
- GAME DEVELOPMENT
- DATABASE DEVELOPMENT
- WEB DEVELOPMENT

## THE CLASSROOM

- Students will participate in a live online classroom using a computer connected to internet in the comfort of their home. There is no need for parents to drop and pick up the kids to attend classes. This helps cut the travel cost and time.
- We also have workshops for youth in their locality to attend and learn software development and collaborate with other students in regular classroom.
- Students can share their questions, thoughts, experiences, and their projects with other students and their teacher through online collaboration or face-to-face meetings.



## PREREQUISITES

- Strong motivation
- Basic logic
- Very basic algebra
- Basic computer usage.



## WHY NOT SELF-LEARNING?

- Although everyone can study alone with books and videos, studying with teacher/mentor has its own benefits.
- Having a teacher/mentor while studying, students can directly ask questions to find out anything ambiguous or something they missed out so that they can fully understand without wasting unnecessary time learning the lessons by themselves.
- If students have some ideas, they also can share with the teacher/mentor to get his/her feedback right away. These benefits are missing if they study alone .



## THE FUNDAMENTALS

- Learn logic & problem solving
- Learn how computer & software work
- Learn building blocks of programming language

## HANDS-ON EXERCISES

- Learn how to design and program object-oriented application, including games, database, and web applications
- Learn how to use tools to collect requirement, design, develop, and test software applications
- Learn how to use tools to collaborate and manage the project from start to end

## REAL WORLD PRACTICES

- Learn how to develop solutions based on given problems from start to end
- Learn how to collaborate with others in delivering solutions
- Learn challenges, processes, practices in the real world software development