

**Assignment – Write a paper (essay format) that meets the following expectations:**

## **Title – Topics in Computer Science**

### **1. Environmental Stewardship and Sustainability**

- D1.1 describe the negative effects of computer use on the environment (e.g., creation of e-waste, excessive use of paper resulting from unnecessary printing of files and emails, heavy power consumption) and on human health (e.g., exposure to radiation, musculoskeletal disorders, eye strain, mental health problems resulting from social isolation, various health consequences of reduced activity levels);
- D1.2 impact of computers on the environment (*e.g., lab regulations, school policies, corporate and government policies promoting paperless workplaces and computer recycling and reuse*) and on human health (*e.g., ergonomic standards*);
- D1.3 describe ways in which computers are or could be used to reduce resource use and to support environmental protection measures (*e.g., computer modelling to reduce use of physical resources; management of natural resources*);
- D1.4 identify government agencies and community partners that provide resources and guidance for environmental stewardship (*e.g., local community recycling centres, private companies that refurbish computers, printer cartridge recycling programs*).

### **2. Exploring Computer Science**

- D2.1 demonstrate an understanding of emerging areas of research in computer science (e.g., cryptography, parallel processing, distributed computing, data mining, artificial intelligence, robotics, *computer vision, image processing, human–computer interaction, security, geographic information systems [GIS]*);
- D2.2 demonstrate an understanding of an area of collaborative research between computer science and another field (*e.g., bioinformatics, geology, economics, linguistics, health informatics, climatology, sociology, art*);
- D2.3 report on an area of research related to computer science, using an appropriate format (*e.g., website, presentation software, video, or other means such as writing a paper*).

### **3. Postsecondary Opportunities**

- D3.1 research and describe career choices and trends in computer science, at the local, national, and international levels;
- D3.2 identify and report on opportunities for experiential learning (*e.g., co-op programs, job shadowing, career fairs*) in the field of computer science;
- D3.3 research and report on postsecondary educational programs leading to careers in information systems and computer science (*e.g., institutions offering relevant programs, industry certifications, courses of study, entrance requirements, length of programs, costs*);

**4. A topic of your choice not discussed above.**

Also include:       - a cover page (Title, course name and code, teacher's name, Date, your name)  
                          - a bibliography page (APA format)

Your essay will be marked based on the following:

Environmental Stewardship and Sustainability	Exploring Computer Science	Postsecondary Opportunities	Your selected topic
D 1.1           /3	D 2.1           /3	D 3.1           /2	
D 1.2           /3	D 2.2           /3	D 3.2           /2	
D 1.3           /3	D 2.3           /2	D 3.3           /3	
D 1.4           /3			
<b>/12</b>	<b>/8</b>	<b>/7</b>	<b>/4</b>

**Cover Page:**                 /1  
**Grammar:**                    /1  
**Bibliography:**             /1  
**Total Marks:**             /34