

Appendix B

Old Dominion University Computer and Technological Literacy Competencies Matrix

Competencies and Definition	Skills
<p>1. Systems hardware: Describe the major components of a computer and how they function as a system.</p>	<p>Define or describe a personal computer system.</p> <p>Identify input devices (Keyboards, pointing devices, and scanning technologies).</p> <p>Identify output devices (Printing technologies - Laser, Matrix, Jet, Display Devices, Projection Devices, etc.).</p> <p>Identify storage devices (Magnetic disk media, card storage, CD-ROM, DVD, etc.).</p> <p>Describe adaptive computer technologies for users with disabilities in the work place.</p>
<p>2. System Software: Explain the purpose of operating systems and use typical system functions.</p>	<p>Define or describe a computer operating system.</p> <p>Describe the benefits of an operating system with a graphic user interface.</p> <p>Describe the functions of operating systems.</p> <p>Manage files and folders.</p>
<p>3. Application Software: Demonstrate skill in using computer applications to solve communication problems.</p>	<p>Select and choose appropriate applications and technologies to create, format, analyze, and distribute data and information.</p> <p>Word Processing: Communicate using print and electronic media; create and format documents linking and embedding external documents and information; form generation; and web-page creation.</p> <p>Create tables, multiple columns, and outlines as a means of organizing and presenting information.</p> <p>Graphics: Produce charts and graphs for clarity in presenting mathematical and analytical data; digital editing of graphic files for inclusion in print and electronic documents.</p>

	<p>Spread Sheets: Design, layout, and format spread sheets that use basic mathematical analytical skills, e.g., addition, subtraction, multiplication, powers, and scientific notation; basic statistical functions, e.g., mean, average, sorting data alphabetically and numerically, and plotting charts and graphs.</p> <p>Database: accessing, managing, and organizing information for research, decision-making, and reporting.</p> <p>Communicating with computers: Describe hardware technologies and connection processes, e.g. dial-up, cable, and network connections.</p>
<p>4. Telecommunications: Demonstrate skill in using computers as electronic communication tools to research, retrieve, and share information.</p>	<p>Use computers as communication tools: demonstrate email, FTP, telnet, conferencing (chat), video conferencing, and creating web pages.</p> <p>Use World Wide Web Resources to locate and retrieve information: use commercial, governmental, institutional, military, and proprietary on-line databases and information resources. Use search engines and search strategies to locate information.</p> <p>Describe information and security issues: copyright issues, trademarks, and privacy.</p> <p>Identify ethical issues in locating and using data information in a digital environment.</p> <p>Describe or define computer Networks and their benefits, e.g. Local Area, Wide Area, Intranets, and the Internet.</p>
<p>5. Computers and Society: Describe and assess the impact of computer and information technologies on society and the work place.</p>	<p>Identify major historical developments in computer technology.</p> <p>Identify trends in development of digital computing devices and appliances.</p> <p>Describe the impact of technology and computers in the work environment.</p> <p>Describe significant technological developments that have changed the way we communicate, analyze, store,</p>

and retrieve information.

Describe the significance of the diffusion of computer technologies in society.

Assess and explain political, social, economic, environmental, cultural, and ethical impact of computers and technology on society.