south dakota DEPARTMENT OF EDUCATION
Learning. Leadership. Service.

Foundations of Technology

Career Cluster	Foundational Course - Foundations of Technology
Course Code	10004
Prerequisite(s)	NA
Credit	.5 or 1.0
Program of Study and Sequence	Suggested foundational course for all 16 Career Clusters
Student Organization	All
Coordinating Work-Based Learning	None
Industry Certifications	Introduction that may lead to Cisco or MOUS certification
Dual Credit or Dual Enrollment	None
Teacher Certification	K-12 Educational Technology
Resources	

Course Description:

The student will learn to identify the general usage of technology, software, and applications. Utilizing that knowledge, this course will cover topics such as, but not be limited to, word processing, spreadsheets, presentations, operating systems, Internet browsers, search engines, databased, preventive maintenance and security, digital literacy, netiquette and citizenship. This course expands the student's skills, knowledge and confidence in various forms of software platforms and applications (e.g. PC, Mac, Google Apps, smart phone, apps, etc.)

Program of Study Application

Foundations of Technology is a foundation course that is intended to precede further studies at the career cluster and career pathway levels.

Course Standards

Indicator # FT 1 **Create and format word processing documents for a variety of personal and work applications**

Webb Level	*Sub-indicator*	*Integrated Content*
Two Skill/Concept	FT 1.1 Modify and manipulate paragraphs and paragraph formatting Examples: • Apply paragraph and section shading • Use text flow options such as keeping lines together • Sort list, paragraphs, and tables • Change line spacing • Reveal the formatting	
Two Skill/Concept	FT 1.2 Use tables to enhance documents Examples: • Create and modify worksheets in a table • Select and perform calculations in a table • Move a table	
Two Skill/Concept	FT 1.3 Customize document formatting Examples: • Use the auto-text feature • Create a header or footer • Create or revise footnotes and endnotes • Create a watermark • Format the first page differently than the subsequent pages • Insert page numbers	
Two Skill/Concept	FT 1.4 Create a mail merge document Examples: • Create a main document • Create a data source • Sort records to be merged • Merge main documents and data sources • Merge a document by using alternate data sources	

Two Skill/Concept	FT 1.5 Create and use features of word processing software Examples: • Insert a field • Create, apply, and edit macros • Copy, rename, and delete macros • Create and modify a form control • Use text alignment features with graphics • Customize toolbars	
Two Skill/Concept	FT 1.6 Format characters Examples: • Change the font, size, look of the text • Format with format painter • Insert symbols and special characters • Use AutoComplete • Highlight text • Insert the date and time	
Two Skill/Concept	FT 1.7 Use Help features Examples: • Use the help feature to format text, format documents, and convert elements (e.g. table to text)	

Notes:

Indicator # FT 2 **Create and format spreadsheets for a variety of personal and work applications**

Webb Level	*Sub-indicator*	*Integrated Content*
Two Skill/Concept	FT 2.1 Format a spreadsheet to enhance its appearance Examples: • Preview a spreadsheet • Change cell dimensions • Insert and delete cells • Add borders and shading to cells • Customize print jobs • Use the spell check feature • Use the undo and redo feature • Sort data • Create a list • Find and replace data in a spreadsheet	
Two Skill/Concept	FT 2.2 Insert formulas into a worksheet to enhance its functionality Examples: • Use the auto sum function • Write formulas with mathematical operators • Use absolute and mixed cell references in a formula	
Two Skill/Concept	FT 2.3 Manipulate data within and between workbooks Examples: • Move, copy, and paste data into cells • Create a workbook with multiple worksheets • Work and print within a range • Change worksheet names	
Two Skill/Concept	FT 2.4 Create charts within a spreadsheet to represent data graphically Examples: • Create and format a chart • Delete a chart • Size and resize a chart to move • Change data in the cells of a chart	

Notes:

Indicator # FT 3 **Create and format professional presentations**

Webb Level	*Sub-indicator*	*Integrated Content*
Two Skill/Concept	FT 3.1 Create a presentation using presentation software Examples: • Plan a presentation • Create and save a presentation • View and print a presentation • Add transitions and sound effects • Prepare a presentation in the outline/slides pane	
Two Skill/Concept	FT 3.2 Modify a presentation Examples: • Edit slides • Complete a spell check • Use the thesaurus • Organize slides	
Two Skill/Concept	FT 3.3 Add visual appeal and animation to a presentation Examples: • Use the format buttons on the drawing toolbar • Display the ruler, guidelines, and grid lines • Insert images in a presentation • Add animation effects to a presentation	

Two Skill/Concept	FT 3.4 Add visual elements to a presentation Examples: • Create organizational charts and diagrams • Create a table • Add sound and video	
Two Skill/Concept	FT 3.5 Share and present professional presentations Examples: • Copy and paste data in a presentation • Import data into a presentation • Set automatic times for slides • Exhibit presentation etiquette • Engage audience	

Notes:

Indicator # FT 4 Demonstrate and communicate an understanding of an operating system's file management system

Webb Level	*Sub-indicator*	*Integrated Content*
Two Skill/Concept	FT 4.1 – Use an operating system's file manager to navigate using various methods to different locations and manage files Examples: • Open a file on the desktop and save it to a network location • Cut and paste a file from the default browser save location to a cloud storage location. • Use shortcut keys to copy and paste a file • Orient two documents so they both take half the screen • Show hidden files	
Three Strategic Thinking	FT 4.2 – Manipulate the operating system's built-in search features Examples: • Employ built-in search to find specific file type	

Notes:

Indicator # FT 5 **Manage administrative features of an operating system**

Webb Level	*Sub-indicator*	*Integrated Content*
Two Skill/Concept	FT 5.1 – Demonstrate knowledge of features in the operating system Examples: • Change accessibility options • Change resolution of computer • Change audio settings • Change power options • Terminate a program using task manager • Use shortcut keys	Some features may look different across platforms (e.g. Mac, Windows, etc.)
Three Strategic Thinking	FT 5.2 – Analyze operating system capabilities and restrictions Examples: • Compare operating system capabilities • Compare operating system restrictions	

Notes:

Indicator # FT 6 **Distinguish and apply key elements of Internet browsers and search engines**

Webb Level	*Sub-indicator*	*Integrated Content*
Two Skill/Concept	FT 6.1 – Demonstrate advanced search techniques within a search engine Examples: • Utilize Boolean logic • Compare search phrases • Identify specific domain (e.g. .gov, .edu, .org) • Recognize international domains	
Two Skill/Concept	FT 6.2 – Analyze different search engines Examples: • Compare various search engines • Communicate an understanding of clustering • Understand the purpose of real time • Utilize directory sites	
Two Skill/Concept	FT 6.3 – Evaluate different Internet browsers Examples: • Compare features of various Internet browsers (e.g. customization, rendering speed, add-on capabilities) • Assess validity and quality of Internet browsers	

Notes:

Indicator # FT7 **Understand how to create a database table and forms using database software.**

Webb Level	*Sub-indicator*	*Integrated Content*
Two Skill/Concept	FT 7.1 – Create a database table Examples: • Enter and modify data in a table • Print a database table • Organize and maintain data in the table	
Two Skill/Concept	FT 7.2 – Create relationships between database tables Examples: • Create related tables • Display related records in a sub datasheet	
Two Skill/Concept	FT 7.3 – Perform queries and filter records Examples: • Design a query with aggregate functions • Create and find duplicates query • Create an unmatched query • Filter data in the query	
Two Skill/Concept	FT 7.4 – Create forms in the database Examples: • Create a form • Create a form in design view	
Two Skill/Concept	FT 7.5 – Create reports in the database Examples: • Create a report • Create a form in report view	

Notes:

Indicator # FT 8 **Demonstrate an understanding of computer preventive maintenance and security**

Webb Level	*Sub-indicator*	*Integrated Content*
Two Skill/Concept	FT 8.1 – Demonstrate various methods of backing up files using different options Examples: • Create a backup of a file by saving an additional copy of the file to flash drive • Export 'Bookmarks' or 'Favorites' to external drive	
Two Skill/Concept	FT 8.2 – Conduct Internet browser maintenance Examples: • Clear the browser cache • Reset a browser to the default configuration • Add and remove extensions from a browser • Change homepage of browser	
Two Skill/Concept	FT 8.3 – Explain the importance of antivirus software Examples: • Initiate an antivirus scan • List different antivirus options • Explain the importance of software and operating system updates	
Two Skill/Concept	FT 8.4 – Communicate an understanding of the importance of password creation and management Examples: • Use different and complex passwords for different websites • Use a password manager to securely save passwords	

Notes:

Indicator # FT 9 **Develop digital literacy, netiquette and citizenship skills**

Webb Level	*Sub-indicator*	*Integrated Content*
Three Strategic Thinking	FT 9.1 – Demonstrate an understanding of the importance of privacy and security within relevant technological tools Examples: • Install an appropriate and applicable firewall for Internet security • Compare various computer/smart phone applications that utilize privacy and security methods	
Three Strategic Thinking	FT 9.2 - Analyze the effect of technology on relationships and communication Examples: • Create a personal cyberbullying statement • Investigate present day legal cases concerning Internet crimes • Communicate an understanding of netiquette • Create a professional email • Create and communicate application of an avatar	
Three Strategic Thinking	FT 9.3 - Demonstrate the complexity of safe, legal and responsible creation of digital footprints and reputations Examples: • Determine the most appropriate strategy to create a positive self-image and identity • Communicate professional methods that are advised for an appropriate digital footprint	
Three Strategic Thinking	FT 9.4 - Follow ethical and legal guidelines in gathering and using digital information and applications Examples: • Develop a digital code of ethics • Investigate the legal aspects of creating and citing digital information	
Three Strategic Thinking	FT 9.5 Effectively decipher reliable information on the web • Wikipedia references • Believe everything you read online • Reliable resources	

Notes: Other things to include: Outlook component (students use K12 email), Pivot Table component (tools of business)

Integrated content: keyboarding, appropriate text for online, word, documents, notes